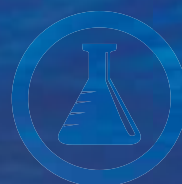




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FP7 - COOPERATION - THEME 2 Interim Catalogue of Projects

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FP7 - KBBE - 2007 - 2A
FP7 - KBBE - 2008 - 2B
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Biotechnologies,
Agriculture, Food



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FP7 - COOPERATION - THEME 2

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Preface

With the world population approaching 9 billion by 2050 and natural resources finite, Europe needs renewable biological resources for secure and healthy food and feed, as well as for materials, energy, and other products. In order to reduce the heavy dependency of its economy on fossil resources and mitigating climate change, Europe needs to move towards a post-petroleum society.

In this context, the Seventh Framework Programme (FP7) in Food, Agriculture and Fisheries, and Biotechnology (FAFB) aims to create a strong and competitive bioeconomy and to offer solutions to challenges facing Europe and the world, such as feeding a growing world population and fighting climate change while mitigating its effects.

This catalogue describes all projects funded under the FP7 during 5 years (2007-2012) bringing together science, industry and other stakeholders to exploit new and emerging research opportunities in the following areas:

Food research looks into maintaining an affordable, safe, healthy and nutritious food supply in the face of changing demographics: a growing world population and increasing urbanisation.

European **agriculture and forestry** must deal with dwindling natural resources, the effects of climate change, the changing global demographic and the need to provide a sustainable, safe and secure food supply for its citizens. Another global challenge is animal health and the control of infectious diseases and zoonoses (infectious diseases that can be transmitted from animals to humans). Furthermore, research into plant health, and sustainable, competitive, multifunctional agriculture and rural development, including forestry, provides support for a number of EU policies.

Depletion of fish stocks, stagnation of the aquaculture production ... The European **fisheries and aquaculture** sectors are currently facing many challenges. To tackle them, the EU is supporting research in a variety of areas to underpin better fisheries management and promote the sustainable and competitive development of aquaculture.

Biotechnology and biochemistry contribute to sustainable non-food products and processes. Our research in this field deals with renewable energy demands, waste reduction and bio-based products and processes for the 'greening' of our industries. It also looks into emerging trends in biotechnology, such as synthetic biology.

All our research supports EU policies in agriculture, fisheries, development, environment, health and other sectors and, in particular, policies involved in the European economic recovery. It therefore forms an integral part of the Europe 2020 strategy.



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ACTIVITY 2.1 SUSTAINABLE PRODUCTION: AGRICULTURE

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

3SR



Sustainable Solutions for Small Ruminants

The 3SR project (Sustainable Solutions for Small Ruminants) brings together a strong and unique international consortium of 14 partners that will mine genomic information of sheep and goats to deliver a step-change in our understanding of the genetic basis of traits underlying sustainable production and health. To do this we will build on existing research resources in the major sheep and goat producing member states to discover and verify (in commercial populations) selectable genetic markers (and causative mutations where possible) for traits critical to sustainable farming, particularly in marginal areas. The targeted sustainability traits are mastitis susceptibility, nematode resistance and ovulation rate. These are traits that would markedly benefit from genetic markers, and traits for which we have evidence that polymorphisms exist with large effects on trait variation. We will apply the latest high-throughput genomics technologies, comparative and functional genomics; together with targeted genome sequencing and extensive in silico analyses to dissect important genetic components controlling these traits. Concurrently, we will deliver significant improvements in available genomic information and technologies for these species, thus having a lasting impact on European research capacity. Our work on genome resources will be undertaken in close collaboration with the International Sheep Genomics Consortium and the International Goat Genome Consortium, and will make use of complementary resources provided by major research projects in Europe, Australasia, USA, Argentina and China. 3SR will provide selectable genetic markers that can be affordably applied by sheep and goat breeders to make important contributions to improving animal health, welfare, sustainability and the long-term competitiveness of small ruminant production in the EU. In addition 3SR will generate a collaborative infrastructure that will enable these 'orphan species' to keep pace with the rapid developments in livestock genomics.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,997,725.00

PROJECT N°

245140

DURATION

36 months

PROJECT START DATE

May 2010

LIST OF PARTNERS

1. BIOSCIENCE NETWORK LIMITED (UK)
2. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
3. THE UNIVERSITY OF EDINBURGH (UK)
4. PARCO TECNOLOGICO PADANO S.R.L. (IT)
5. ARISTOTELIO PANEPISTIMIO THESSALONIKIS (EL)
6. UTAH STATE UNIVERSITY (US)
7. AGRIS SARDEGNA - AGENZIA PER LA RICERCA IN AGRICOLTURA (IT)
8. UNIVERSIDAD DE LEON (ES)
9. PANEPISTIMIO THESSALIAS (UNIVERSITY OF THESSALY) (EL)
10. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
11. SZKOLA GLOWNA GOSPODARSTWA WIEJSKIEGO (PL)
12. COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION (AU)
13. HUAZHONG AGRICULTURAL UNIVERSITY (CN)
14. INSTITUTO NACIONAL DE TECNOLOGIA AGROPECUARIA (AR)

FP7-KBBE-2009-3

3SR



Mining genomics information of small ruminants to generate understanding of the genetic basis of phenotypes important to sustainable production and health

www.3srbreeding.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

ABSTRESS



Improving the resistance of legume crops to combined abiotic and biotic stress

ABSTRESS applies combined, integrated systems biology and comparative genomics approaches to conduct a comprehensive study of the gene networks implicated in the interaction of drought stress and Fusarium infection in legumes. It uses *Medicago truncatula* as a model to rapidly identify characteristics for introgression into elite pea varieties and a field test of their performance against existing commercial varieties. The project will demonstrate the advantages of applying advanced phenotyping methods for the generation of improved varieties of a commercial crop. Legumes have been chosen as the preferred study crop because they are susceptible to a combination of abiotic and biotic stresses. By increasing their cultivation, they offer the greatest opportunity to reduce the generation of greenhouse gases from agriculture and hence contribute to the efforts to control climate change. Therefore ABSTRESS aligns with the European Strategic Research Agenda 2025. ABSTRESS will achieve a step change in “sustainability in agriculture” by undertaking breeding research that seeks to develop varieties having improved resistance to a combination of biotic and abiotic stresses. The novelty of the project is demonstrated by the generation, identification and understanding new genetic materials; addressing commercial requirements for the development of a successful new crop variety by utilising SME expertise; testing new in a range of growing conditions; addressing impact on Fusarium in other crops; have application to crop breeding generally; incorporating drought stress which is likely to be a major factor for climate change; developing high throughput molecular phenotyping, to gain a step change in the speed of the breeding cycle. Thus, this well structured, innovative research can lead to ground breaking achievements in plant breeding. These will help to ameliorate climate change and develop the tools to mitigate their effects on a sustainable food /feed supply chain.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,074.00

PROJECT N°

289562

DURATION

60 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
2. UNIVERSITY OF ESSEX (UK)
3. ABERYSTWYTH UNIVERSITY (UK)
4. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
5. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
6. MEZŐGAZDASÁGI BIOTECHNOLÓGIAI KUTATÓKÖZPONT (HU)
7. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
8. GENXPRO GMBH (DE)
9. ARTERRA BIOSCIENCE SRL (IT)
10. PROCESSORS & GROWERS RESEARCH ORGANISATION LBG (UK)
11. AGROVEGETAL S.A. (ES)
12. AGRITEC, VYZKUM, SLECHTENI A SLUZBY S.R.O. (CZ)
13. BIOTECGEN SRL (IT)

FP7-KBBE-2011-5

Integrated approach to studying effects of combined biotic and abiotic stress in crop plants

ABSTRESS

www.abstress.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

AENEAS



Acquired Environmental Epigenetics Advances: from Arabidopsis to maize

This proposal, entitled “Acquired Environmental Epigenetics Advances: from Arabidopsis to maize” (acronym: AENEAS), aims to assess the impact of environmental conditions on epigenetic states in the model plant *Arabidopsis thaliana* and then transfer knowledge to maize (*Zea mays*): an important European crop. Advances in understanding the detailed mechanisms of epialleles formation in response to environmental cues and their heritable maintenance in a model plant such as *Arabidopsis* will be the starting objective of the AENEAS proposal. To this end, we will focus on three epigenetic regulatory pathways, which have been well characterized for their interaction with environmental signals in mediating changes into the epigenome. They are: the autonomous, the small RNA and the CpG methylation pathways. The outcome of this research activity will be a road map for plant environmental epigenetics, necessary for further progress of the basic research in this area and for the transfer of the knowledge to crop plants. Concomitantly, the constitution of an “Environmental Epigenetics platform” for maize, will start with the development of tools indispensable for the shift of epigenetic research from *Arabidopsis* to maize. This will be achieved by the functional characterization of maize mutants for epi-regulators belonging to the three pathways studied in *Arabidopsis*. The tools will comprise: maize epi-regulator mutants, their targets, and information about their interaction with environmental cues for epialleles formation and inheritance throughout generations. It is our opinion that the deliverables from AENEAS will be the “progenitors” for the next-generation of breeding programs, based on the exploitation of the environmental-induced epigenetics variability. In addition, we will conduct a comparative genomics analysis of data arising from the project to generate comparative models for environmental epigenomics in two evolutionary distinct species such as *Arabidopsis* and maize.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,992,863.00

PROJECT N°

226477

DURATION

48 months

PROJECT START DATE

April 2009

LIST OF PARTNERS

1. UNIVERSITA DEGLI STUDI DI PADOVA (IT)
2. CONSIGLIO PER LA RICERCA E SPERIMENTAZIONE IN AGRICOLTURA (IT)
3. THE UNIVERSITY OF WARWICK (UK)
4. UNIVERSITE DE GENEVE (CH)
5. JOHN INNES CENTRE (UK)
6. THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE (UK)
7. MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. (DE)
8. BIOGEMMA (FR)

FP7-KBBE-2008-2B

AENEAS



Development of new tools and processes based upon genomic resources to support R&D in crop plants for breeding

www.aeneas-a2m.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

ECOSEED



Impacts of Environmental Conditions on Seed Quality

Seed quality is of paramount importance to agriculture, food security and the conservation of wild species. Considerable economic losses result from sub-optimal seed performance, undermining food security and livelihoods. Seed quality is strongly influenced by the environmental stresses experienced by the mother plant. Climate change will further exacerbate economic losses and decrease the predictability of seed yield and quality for the farmer. The looming challenges of climate change and food security require new knowledge of how stress impacts on seed quality, as well as a re-appraisal of optimal storage conditions. EcoSeed addresses these challenges by bringing together a group of distinguished European experts in seed science and converging sciences to characterise seed quality and resilience to perturbation. EcoSeed combines state-of-the-art "omics" and post-"omics" approaches, such as DNA repair, oxidative and post-translational modifications to macromolecules, to define regulatory switchboards that underpin the seed phenotype. Special emphasis is placed on the stress signalling hub that determines seed fate from development, through storage, germination and seedling development, with a particular focus on seed after-ripening, vigour, viability and storability. Translation of new knowledge gained in model to crop and wild species is an integral feature of EcoSeed project design, which will create a step-change in our understanding of the regulatory switchboards that determine seed fate. Novel markers for seed quality and new "omics" information generated in this project will assist plant breeders, advise the seed trade and conservationists alike. In this way, EcoSeed will not only be proactive in finding solutions to problems of ensuring seed quality and storability but also play a leading role in enabling associated industries to better capture current and emerging markets.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,930,937.00

PROJECT N°

311840

DURATION

48 months

PROJECT START DATE

January 2013

LIST OF PARTNERS

1. UNIVERSITÄT INNSBRUCK (AT)
2. ROYAL BOTANIC GARDENS, KEW (UK)
3. LEIBNIZ - INSTITUT FÜR PFLANZENGENETIK UND KULTURPFLANZENFORSCHUNG (DE)
4. UNIVERSITÉ PIERRE ET MARIE CURIE - PARIS 6 (FR)
5. MAX PLANCK GESELLSCHAFT ZUR FÖRDERUNG DER WISSENSCHAFTEN E.V. (DE)
6. THE UNIVERSITY OF WARWICK (UK)
7. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
8. UNIVERSITY OF LEEDS (UK)
9. UNIVERSIDAD DE SALAMANCA (ES)
10. COMMISSARIAT A L'ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (FR)
11. LIMAGRAIN EUROPE (FR)

FP7-KBBE-2012-6-singlestage

ECOSEED

Improving seeds for agriculture and conservation activities

www.uibk.ac.at/botany/units_research_groups/biochemistry.html.en



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

EU-PLF



Bright Farm by Precision Livestock Farming

The objective of the EU-PLF project is to deliver a validated Blueprint for an animal and farm-centric approach to innovative livestock farming in Europe proven through extensive field studies. This blueprint represents a manual for farmers and their surrounding industry including high tech SME's and other stakeholders. It is a reference tool offering pragmatic guidance on how Precision Livestock Farming (PLF) systems can be applied to farm level in order to create value for the farmer and other stakeholders. EU-PLF is based on the PLF concept that represents the continuously automated measurements directly on the animal or in its environment. Beyond the use of the PLF data (body movements or sounds, etc.) for monitoring and management, the data can be translated into key indicators on animal welfare, animal health, productivity and environmental impact.

Highly experienced European teams from different disciplines with a proven track record in animal and PLF-related fields - animal scientists, veterinarians, ethologists, bio-engineers, engineers, social scientists and economists, leading industrial market players in the livestock industry and high tech SME's - have joined to deliver a useful PLF Blueprint. Most of the academic partners are leading previous research projects funded by the EU in animal and PLF related fields.

To ensure that the Blueprint assists the European livestock industry beyond the duration of the project, 50 SME's or potential starters will be identified all over Europe to play a key role in the EU-PLF project. With a competition for SME's and starters, the best ideas get funding to design a PLF-prototype with their high tech innovative solutions. In collaboration with a leading industrial PLF-partner, they use the Blueprint to bring their prototype to farm level. This allows developing business models and linking high tech SME's to European industry players to create new PLF-products with global impact.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,965,357.00

PROJECT N°

311825

DURATION

48 months

PROJECT START DATE

under negotiation

LIST OF PARTNERS

1. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
2. SVERIGES LANTBRUKSUNIVERSITET (SE)
3. UNIVERSITY OF BRISTOL (UK)
4. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
5. UNIVERSITA DEGLI STUDI DI MILANO (IT)
6. THE AGRICULTURAL RESEARCH ORGANISATION OF ISRAEL - THE VOLCANI CENTRE (IL)
7. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
8. THE ROYAL VETERINARY COLLEGE (UK)
9. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
10. FANCOM B.V. (NL)
11. DELAVAL INTERNATIONAL (SE)
12. SOUNDTALKS (BE)
13. PLF AGRITECH EUROPE (UK)
14. XENON NEW TECHNOLOGIES (BE)
15. ABROX TECNIC SL (ES)
16. SP/F SYNTESA (FO)
17. NUTRITION SCIENCES NV (BE)
18. EUROPEAN ASSOCIATION FOR ANIMAL PRODUCTION (IT)
19. M & M CORPORATION COMMVA (BE)
20. WAGENINGEN UNIVERSITEIT (NL)

FP7-KBBE-2012-6-singlestage

EU-PLF



Animal and farm-centric approach to precision livestock farming in Europe

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

FIGARO



Flexible and Precise Irrigation Platform to Improve Farm Scale Water Productivity

The objective of the FIGARO project is to significantly reduce the use of fresh water on farm level through developing a cost-effective, precision irrigation management platform. The platform will be structured for data acquisition from monitoring devices and forecasting tools, data interpretation, system control, and evaluation mechanisms enabling full decision support for end users at farm scale. These tools will be integrated with multiple state-of-the-art irrigation technologies and strategies as well as newly adapted devices leading to further increased water productivity. The flexibility, cost-effectiveness, ease of use, minimal maintenance of the system and often, increases in crop yield, will boost its acceptance and up-take by the end-users (the farmers, extension workers). In addition, as added value the system will enable reduction of fertilizer use, further supporting sustainable use of natural resources and adaptation of agricultural practice to climate change. To achieve this, the FIGARO project will develop a holistic and structured precision irrigation platform which will offer farmers flexible, crop-tailored irrigation scheduling protocols for their specific fields taking account spatial variability management.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,987.00

PROJECT N°

311903

DURATION

48 months

PROJECT START DATE

under negotiation

LIST OF PARTNERS

1. NETAFIM (IL)
2. AARHUS UNIVERSITET (DK)
3. HYDROLOGIC RESEARCH BV (NL)
4. UNIVERSIDAD POLITECNICA DE VALENCIA (ES)
5. C-TECH INNOVATION LIMITED (UK)
6. EDEN IRRIGATION CONSULTANCY LTD (UK)
7. HIDROMOD MODELACAO EM ENGENHARIA LDA (PT)
8. AGROSENS (DK)
9. INSTITUTO SUPERIOR TECNICO (PT)
10. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
11. CONSORZIO DI BONIFICA DI SECONDO GRADO PER IL CANALE EMILIANO ROMAGNOLO (IT)
12. TECHNION - ISRAEL INSTITUTE OF TECHNOLOGY. (IL)
13. DEMOCRITUS UNIVERSITY OF THRACE (EL)
14. REGIONAL UNION OF MUNICIPALITIES OF EASTERN MACEDONIA - THRACE (EL)
15. UNIVERSITEIT TWENTE (NL)
16. FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS FAO (IT)
17. AGORA P.S.V.D. LTD (IL)

FP7-KBBE-2012-6-singlestage

FIGARO



Precision technologies to improve irrigation management and increase water productivity in major water-demanding crops in Europe

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

FORGER



Towards the Sustainable Management of Forest Genetic Resources in Europe

Forest genetic resources (FGR) form the base for adaptation of European forests to future environmental conditions and societal demands. Appropriate use and sustainable management of FGR is therefore of utmost importance. Past decades have shown: (i) an immense progress in detecting patterns of genetic diversity, due to fast technological advances, (ii) increased knowledge on the modelling of responses of tree species to changing environmental conditions; (iii) increased awareness by policy makers across Europe, leading to increased efforts for the conservation of FGR in all European member states. E.g. by the establishment forest stands with the aim to conserve genetic diversity. However, currently there is no sound management on the sustainable use of FGR neither in these gene conservation units nor in production forests, to meet future changes.

The FORGER project aims at integrating and extending existing knowledge to provide science-based recommendations on the management and sustainable use of FGR for EU-policy makers, national stakeholders, forest managers, and managers of natural areas. The project will galvanize around five interconnected objectives: 1) synthesise and further develop knowledge from European FGR inventories by linking and extending existing databases to provide the knowledge base to sustain FGR at the pan-European level for stakeholders; 2) deliver a general monitoring system of forest genetic diversity that can be efficiently and economically applied by all EU Member States; 3) assess current and future distribution of genetic diversity under a number of forest management scenarios and climate change; 4) provide an overview of past and current transfer of forest reproductive material across Europe and its consequences for local adaptation; 5) formulate guidelines and recommendations to sustain forest genetic resources in both gene conservation units and production forests to meet the challenge of a changing environment and societal needs.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,918.00

PROJECT N°

289119

DURATION

48 months

PROJECT START DATE

March 2012

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. BUNDESFORSCHUNGS-UND AUSBILDUNGSZENTRUM FÜR WALD, NATURGEFAHREN UND LANDSCHAFT (AT)
3. JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FÜR LANDLICHE RAUME, WALD UND FISCHEREI (DE)
4. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
5. METSANTUTKIMUSLAIKOS (FI)
6. UNIVERSITY OF WEST HUNGARY (HU)
7. INTERNATIONAL PLANT GENETIC RESOURCES INSTITUTE*IPGRI (IT)
8. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
9. UNIWERSYTET KAZIMIERZA WIELKIEGO (PL)

FP7-KBBE-2011-5

FORGER

Sustaining and managing forest tree genetic resources

www.fp7-forger.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

FRUIT BREEDOMICS

Integrated approach for increasing breeding efficiency in fruit tree crops

Fruit Breedomics has as its strategic goal to improve the efficiency of fruit breeding by bridging the gap between scientific genetics research and application in breeding. Fruit Breedomics takes a multidisciplinary approach, including genetics, genomics, ecophysiology and bioinformatics, to improve the efficiency apple and peach breeding programmes by: i) developing new and adapted tools, ii) studying a wide range of traits to enlarge the coverage of selection criteria, iii) analysing and exploiting the wide genetic diversity available, iv) making the research outputs (valuable traits, genetic markers and genes, innovative tools and methodologies, new plant material) directly applicable for the breeders, v) establishing a stakeholder network.

Fruit Breedomics will provide the European fruit tree sector with cutting-edge breeding tools to improve selection efficiency as well as superior pre-breeding material to meet grower and consumer demands for healthy cultivars of high quality that can be grown in sustainable agriculture systems in the context of climate change. The project will develop tailored molecular and bioinformatics tools to extensively exploit the diversity present in European germplasm collections and breeding populations. This will lead to the selection of desired favourable genes needed for improvement of main horticultural traits. The collected data will provide precious genetic information on the pool of genitors and founders to be used in future breeding programmes. The project will focus primarily on apple and peach, two major fruits in Europe, but many tools and much knowledge gained will also be of benefit to other species of the Rosaceae family via the strong ancestral relatedness among these species.

FP7-KBBE-2010-4

FRUIT BREEDOMICS



Genetic and genomic tools to
increase the breeding efficiency
in fruit trees

www.fruitbreedomics.com



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,296.00

PROJECT N°

265582

DURATION

54 months

PROJECT START DATE

March 2011

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. THE AGRICULTURAL RESEARCH ORGANISATION OF ISRAEL - THE VOLCANI CENTRE (IL)
3. AGRO SELECTIONS FRUITS SAS (FR)
4. BETTER3FRUIT NV (BE)
5. CENTRE WALLON DE RECHERCHES AGRONOMIQUES (BE)
6. CONSIGLIO PER LA RICERCA E SPERIMENTAZIONE IN AGRICOLTURA (IT)
7. NERI DANIELE (IT)
8. EIDGENÖSSISCHE TECHNISCHE HOCHSCHULE ZÜRICH (CH)
9. EIDGENÖSSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT (CH)
10. FONDAZIONE EDMUND MACH (IT)
11. INRA TRANSFERT S.A. (FR)
12. INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES (ES)
13. JULIUS KUHN INSTITUT BUNDESFORSCHUNGSINSTITUT FÜR KULTURPFLANZEN (DE)
14. NOVADI SARL (FR)
15. PARCO TECNOLOGICO PADANO S.R.L. (IT)
16. VYZKUMNY A SLECHTITELSKY USTAV OVOCNARSKY HOLOVOUSY S.R.O. (CZ)
17. RUSTICAS DEL GUADALQUIVIR SL (ES)
18. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
19. UNIVERSITA DEGLI STUDI DI MILANO (IT)
20. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
21. THE UNIVERSITY OF READING (UK)
22. AGRICULTURAL RESEARCH COUNCIL (ARC) (ZA)
23. THE NEW ZEALAND INSTITUTE FOR PLANT AND FOOD RESEARCH LIMITED (NZ)
24. ZHEJIANG UNIVERSITY (CN)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

MACROSYS



Macrophage Systems Biology Applied To Disease Control

Cattle farming is one of the most important agricultural activities in the EU. This project will address issues of the health and welfare of cattle and the safety of cattle products, focussing on diseases that are on the increase in European cattle population and are of growing concern elsewhere. Two related diseases will be targeted, bovine tuberculosis (TB) and bovine paratuberculosis (Para-TB or Johnes disease). The objective of the proposed project is to use a combined functional and classical genomics and system biology approaches (systems genetics) to investigate host-pathogen interactions and the host immune response to myco-bacterium infection. The outcomes will be 1) increased knowledge of macrophage function the application of this knowledge will be to develop tests to identify infected animals, and 2) the identification of genes that regulate the response of an individual to infection: information that could be applied in selective breeding programmes. Specifically the project will use functional, comparative genomics and in silico analysis to understand the genetic control of variation in the outcomes of disease challenge to develop molecular diagnostic tools to improve disease surveillance and to assist in selective improvement of breeding of cattle to control these diseases. Hence the project will impact directly on improved animal health. Healthy livestock are more productive and so the improvements achieved will contribute to improved efficiency and profitability of animal production and competitiveness of animal production and hence the sustainability of farming systems. The work will contribute both to improved animal health and welfare and also to the improved safety of animal products and to safeguarding human health. The project involves an SME partner who will assess the market requirements and lead the development of project outcomes to commercially viable products to ensure that the research is appropriately and efficiently exploited.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,108.00

PROJECT N°

211602

DURATION

48 months

PROJECT START DATE

November 2008

LIST OF PARTNERS

1. ISTITUTO SPERIMENTALE ITALIANO "LAZZARO SPALLANZANI" (IT)
2. UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN (IE)
3. THE UNIVERSITY OF EDINBURGH (UK)
4. THE PROVOST FELLOWS & SCHOLARS OF THE COLLEGE OF THE HOLY AND UNDIVIDED TRINITY OF QUEEN ELIZABETH NEAR DUBLIN (IE)
5. QUEEN'S UNIVERSITY BELFAST (UK)
6. JUSTUS-LIEBIG-UNIVERSITÄT GIESSEN (DE)
7. FINNZYMES OY (FI)
8. PARCO TECNOLOGICO PADANO S.R.L. (IT)

FP7-KBBE-2007-1

MACROSYS



Mining genomics information of farm animals to generate new information on the genetic basis of phenotypes important to sustainable animal production

www.macrosys-project.eu/



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

MEIOSYS



Systematic analysis of factors controlling meiotic recombination in higher plants

Meiotic recombination has underpinned plant breeding for the generation of new traits of agronomic, environmental and economic importance, although we still have little understanding of the controlling mechanisms involved in this process. We will combine approaches in genomics and systems biology to obtain a detailed understanding of the factors that control recombination and will provide a basis for the development of strategies to modify recombination in a variety of crop species.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

4,499,920.00

PROJECT N°

222883-2

DURATION

60 months

PROJECT START DATE

July 2009

LIST OF PARTNERS

1. THE UNIVERSITY OF BIRMINGHAM (UK)
2. UNIVERSITAET WIEN (AT)
3. FORSCHUNGSINSTITUT FUER MOLEKULARE PATHOLOGIE GES.M.B.H (AT)
4. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
5. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS) (FR)
6. UNIVERSIDAD COMPLUTENSE DE MADRID (ES)
7. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
8. RADBOUD UNIVERSITEIT NIJMEGEN - STICHTING KATHOLIEKE UNIVERSITEIT (NL)
9. JAMES HUTTON INSTITUTE (UK)

FP7-KBBE-2007-2A

MEIOSYS



Development of genetic systems for crop
improvement through a systems biology approach

www.meiosys.org



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

NEXTGEN



Next generation methods to preserve farm animal biodiversity by optimizing present and future breeding options

NEXTGEN proposes the bold step of using whole genome data to develop and optimise conservation genetic management of livestock diversity for the foreseeable future. The rationale for choosing whole genome data is to 'future-proof' DNA-based analysis in livestock conservation against upcoming changes in technology and analysis. Thus, in the context of whole genome data availability, our global objective is to develop cost-effective optimized methodologies for preserving farm-animal biodiversity, using cattle, sheep, and goats as model species. More specifically, NEXTGEN will:

- produce whole genome data in selected populations;
- develop the necessary bioinformatics approaches, taking advantage of the 1 000 human genomes project, and focusing on the identification of genomic regions under recent selection (adaptive / neutral variation);
- develop the methods for optimizing breeding and biobanking, taking into account both neutral and adaptive variations;
- develop innovative biobanking methods based on freeze-dried nuclei;
- provide guidelines for studying disease resistance and genome/environment relationships in a spatial context;
- assess the value of wild ancestors and breeds from domestication centres as genetic resources;
- assess the performance of a surrogate marker system compared with whole genome sequence data for preserving biodiversity;
- provide efficient training and a wide dissemination of the improved methodologies.

The consortium has been designed to specifically reach these objectives, and encompasses skills in conservation genetics, bioinformatics, biobanking and breeding technologies, GIScience. The work plan has been established with great care.

The sequencing task has been postponed to year 3 to take advantage of cost dynamics, while the two first years are dedicated to bioinformatics and to an innovative sampling strategy that fully integrates the spatial aspect and that offers more value at the data analysis stage.

FP7-KBBE-2009-3

NEXTGEN



Optimisation of methods to maintain farm animal biodiversity – SICA

<http://nextgen.epfl.ch>



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,999.00

PROJECT N°

244356

DURATION

48 months

PROJECT START DATE

April 2010

LIST OF PARTNERS

1. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
2. CARDIFF UNIVERSITY (UK)
3. UNIVERSITA CATTOLICA DEL SACRO CUORE (IT)
4. PARCO TECNOLOGICO PADANO S.R.L. (IT)
5. EUROPEAN MOLECULAR BIOLOGY LABORATORY (DE)
6. ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE (CH)
7. UNIVERSITA DEGLI STUDI DI TERAMO (IT)
8. MAKERERE UNIVERSITY (UG)
9. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (MA)
10. GORGAN UNIVERSITY OF AGRICULTURAL SCIENCE AND NATURAL RESOURCES (IR)
11. COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION (AU)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

PGR SECURE



Novel characterization of crop wild relative and landrace resources as a basis for improved crop breeding

Aim – To research novel characterization techniques and conservation strategies for European crop wild relative and landrace diversity, and further to enhance crop improvement by breeders, as a means of underpinning European food security in the face of climate change.

Research Approach – To achieve its aim the project will include four research themes split into five research workpackages, plus dissemination and management workpackages:

1. Novel characterization techniques, including: (1a) Genomics, phenotyping and metabolomics, (1b) Transcriptomics, (1c) Focused Identification of Germplasm Strategy.
2. CWR and LR conservation, including: (2a) Europe-wide CWR inventory, (2b) Exemplar national CWR inventories, (2c) European CWR strategy, (2d) Europe-wide LR inventory, (2e) Exemplar national LR inventories, (2f) European LR strategy.
3. Facilitating breeders' CWR and LR use, including: (3a) Identifying breeders' needs, (3b) Meeting breeders' needs, (3c) Integration of conservation and user communities.
4. Informatics development, including: (4a) CWR and LR inventory information web availability, (4b) Novel characterization information web availability, (4c) Inter-information system operability.

The project, initiated by the European Cooperative Programme for Plant Genetic Resources In Situ and On-Farm Conservation Network will involve 42 European countries, as well as both large and smaller European plant breeding companies.

PROJECT COORDINATOR

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- THE UNIVERSITY OF BIRMINGHAM (UK)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,389.00

PROJECT N°

266394

DURATION

42 months

PROJECT START DATE

March 2011

LIST OF PARTNERS

1. THE UNIVERSITY OF BIRMINGHAM (UK)
2. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
3. INTERNATIONAL PLANT GENETIC RESOURCES INSTITUTE*IPGRI (IT)
4. UNIVERSITA DEGLI STUDI DI PERUGIA (IT)
5. JULIUS KUHN INSTITUT BUNDESFORSCHUNGSINSTITUT FÜR KULTURPFLANZEN (DE)
6. NORDISKT GENRESURSCENTER (SE)
7. MAA JA ELINTARVIKETALOUDEN TUTKIMUSKESKUS (FI)
8. UNIVERSIDAD REY JUAN CARLOS (ES)
9. SERVICEXS BV (NL)
10. THE UNIVERSITY OF NOTTINGHAM (UK)

FP7-KBBE-2010-4

PGR SECURE



Characterisation of biodiversity resources for wild crop relatives to improve crops by breeding

www.pgrsecure.org



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

PROCOGEN



Promoting a functional and comparative understanding of the conifer genome- implementing applied aspects for more productive and adapted forests.

In the midst of a climatic change scenario, the genetics of adaptive response in conifers becomes essential to ensure a sustainable management of genetic resources and an effective breeding. Conifers are the target of major tree breeding efforts worldwide. Advances in molecular technologies, such as next-generation DNA sequencing technologies, could have an enormous impact on the rate of progress and achievements made by tree breeding programmes. These new technologies might be used not only to improve our understanding of fundamental conifer biology, but also to address practical problems for the forest industry as well as problems related to the adaptation and management of conifer forests. In this context, ProCoGen will address genome sequencing of two keystone European conifer species. Genome re-sequencing approaches will be used to obtain two reference pine genomes. Comparative genomics and genetic diversity will be closely integrated and linked to targeted functional genomics investigations to identify genes and gene networks that efficiently help to develop or enhance applications related to forest productivity, forest stewardship in response to environmental change or conservation efforts. The development of high-throughput genotyping tools will produce an array of pre-breeding tools to be implemented in forest tree breeding programmes. ProCoGen will also develop comparative studies based on orthologous sequences, genes and markers, which will allow guiding re-sequencing initiatives and exploiting the research accumulated on each of the species under consideration to accelerate the use of genomic tools in diverse species. ProCoGen will integrate fragmented activities developed by European research groups involved in several ongoing international conifer genome initiatives and contribute to strengthening international collaboration with North American initiatives (US and Canada).

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,978,303.00

PROJECT N°

289841

DURATION

48 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. UNIVERSIDAD DE ALCALA (ES)
2. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
3. UNIVERSIDAD DE MALAGA (ES)
4. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
5. INSTITUT TECHNOLOGIQUE FCBA (FORETCELLULOSE BOIS-CONSTRUCTION AMEUBLEMENT) (FR)
6. UMEA UNIVERSITET (SE)
7. VIB (BE)
8. BUNDESFORSCHUNGS-UND AUSBILDUNGSZENTRUM FÜR WALD, NATURGEFAHREN UND LANDSCHAFT (AT)
9. OULUN YLIOPISTO (FI)
10. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
11. INSTITUTO DE BIOLOGIA EXPERIMENTAL E TECNOLOGICA (PT)
12. THE UNIVERSITY OF EDINBURGH (UK)
13. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
14. NORSK INSTITUTT FOR SKOG OG LANDSKAP (NO)
15. BARCELONA SUPERCOMPUTING CENTER - CENTRO NACIONAL DE SUPERCOMPUTACION (ES)
16. FORESTRY COMMISSION RESEARCH AGENCY (UK)
17. UNIVERSITE LAVAL (CA)
18. UNIVERSITY OF BRITISH COLUMBIA (CA)
19. FUNDACIO PRIVADA CENTRE DE REGULACIO GENOMICA (ES)
20. SVERIGES LANTBRUKSUNIVERSITET (SE)
21. UNIVERSITAT DE VALENCIA (ES)

FP7-KBBE-2011-5

Promoting conifer genomic resources

PROCOGEN

www.procogen.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

QUANTOMICS



From Sequence to Consequence - Tools for the Exploitation of Livestock Genomes

QUANTOMICS will deliver a step-change in the availability of cutting edge technologies and tools for the economic exploitation of livestock genomes. We will provide the tools to identify rapidly the causative DNA variation underpinning sustainability in livestock and for industry to exploit high-density genomic information. Our adaptable quantitative and genomic tools each based on cutting-edge technologies and valuable in itself, will together form a powerful integrated pipeline with wide application. To deliver these outcomes we will; i) use comparative genomics to annotate putatively functional features of the genomes of the EU's key farmed animal livestock species; ii) enhance existing molecular genetic tools (to include copy number variation, CNV); iii) deliver computationally optimised tools for genome-wide selection (GWS) to include CNV; iv) apply these tools to important health and welfare traits in commercial populations of dairy cattle and broiler chickens, determining the benefits and constraints; v) use High-Throughput resequencing of DNA within identified genomic features underlying loci of large effect in significant numbers of animals to catalogue variation; vi) develop new visualisation tools to make this variation publicly available via the Ensembl genome-browser; vii) develop tools to prioritise the likely functionality of identified polymorphisms; viii) validate the utility of the putative causative haplotypes within commercial populations; ix) test the potential advances from combined GWS and gene assisted selection in breeding programmes; x) explore new methods to manage molecular biodiversity; xi) assess the implications of these new tools for breeding programme design, and xii) disseminate results of the project achieving major competitive, animal health and welfare impacts across the EU livestock industry and ultimately consumers. QUANTOMICS will have wide application in all farmed species and leave a legacy of resources for future research.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,671.00

PROJECT N°

222664-2

DURATION

48 months

PROJECT START DATE

June 2009

LIST OF PARTNERS

1. BIOSCIENCE NETWORK LIMITED (UK)
2. AARHUS UNIVERSITET (DK)
3. UNIVERSITETET FOR MILJO OG BIOVITENSKAP (NO)
4. EUROPEAN MOLECULAR BIOLOGY LABORATORY (DE)
5. THE UNIVERSITY OF EDINBURGH (UK)
6. UNIVERSITAT AUTONOMA DE BARCELONA (ES)
7. UNIVERSITA DEGLI STUDI DI MILANO (IT)
8. MAA JA ELINTARVIKETA LOUDEN TUTKIMUSKESKUS (FI)
9. UNIVERSITAET LEIPZIG (DE)
10. AVIAGEN LIMITED (UK)
11. THE HEBREW UNIVERSITY OF JERUSALEM (IL)
12. ARISTOTELIO PANEPISTIMIO THESSALONIKIS (EL)
13. ARGENTIX LIMITED (UK)
14. FUNDACIO PRIVADA CENTRE DE REGULACIO GENOMICA (ES)
15. LANDBRUK OG FØDEVARER (DK)
16. COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION (AU)
17. ASSOCIAZIONE NAZIONALE ALLEVATORI BOVINI DELLA RAZZA BRUNA (IT)

FP7-KBBE-2007-2A

QUANTOMICS

Development of technologies and tools for the exploitation of livestock genome

www.quantomics.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

RECBREED



Recombination: an old and new tool for plant breeding

Successful and efficient plant breeding depends on rapid recombination of advantageous traits to form new crop varieties. In recent years new breeding techniques have been introduced which rely on transgenic alteration of somatic cells and regeneration into plants with novel properties. The precision and effectiveness of both strategies rely upon homologous recombination (HR). The objective of this proposal is to provide plant breeders with new tools allowing better control over HR in both somatic and meiotic cells. The expected outcomes of the proposed research are efficient gene targeting (GT) technologies for precise engineering of plant genomes and control of rates of meiotic recombination between homologous or homeologous chromosomes in classical breeding. The major components of the HR machinery are common to somatic and meiotic cells, enabling us to address both processes in a synergistic way. HR can be divided into different steps: initiation by formation of a DNA double-strand break (DSB); recognition and invasion of an homologous DNA sequence; resolution of recombination structures. Each stage contains a bottleneck for both GT and meiotic HR that we will address. Work package 1 (WP1) aims at enhancing HR through targeted DSB induction. DSBs will be induced by Zinc-finger nucleases that can be custom-designed for target sequences anywhere in the genome. In WP2, we will test the influence of HR factors affecting homologue invasion and heteroduplex formation, such as RAD51 and its paralogues, the RAD52 homologue, genes that affect cytosine methylation in DNA, and mismatch repair. In WP3 we will concentrate on proteins involved in resolution and crossing-over. WP4 will test combinations of those approaches found in the first three WPs to build optimal strategies for application. Most experiments will be performed in the model plant Arabidopsis and implemented into crops such as tomato and maize to guarantee quick applicability for breeding.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,997,147.00

PROJECT N°

227190

DURATION

48 months

PROJECT START DATE

March 2009

LIST OF PARTNERS

1. KARLSRUHER INSTITUT FUER TECHNOLOGIE (DE)
2. WEIZMANN INSTITUTE OF SCIENCE (IL)
3. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS) (FR)
4. UNIVERSITE DE GENEVE (CH)
5. UNIVERSITEIT LEIDEN (NL)
6. KEYGENE NV (NL)
7. BIOGEMMA (FR)
8. OSM-DAN LTD. (IL)

FP7-KBBE-2008-2B

RECBREED

Development of new tools and processes based upon genomic resources to support R&D in crop plants for breeding

<http://recbreed.eu/>



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

RUMINOMICS



Connecting the animal genome, gastrointestinal microbiomes and nutrition to improve digestion efficiency and the environmental impacts of ruminant livestock production

This project will integrate at the highest possible level expertise and technologies to increase the efficiency and decrease the environmental footprint of ruminant production, significantly advancing current knowledge in this sector. The project will exploit state-of-the-art -omics technologies to understand how ruminant gastrointestinal microbial ecosystems, or microbiomes, are controlled by the host animal and by the diet consumed, and how this impacts on greenhouse gas emissions, efficiency and product quality. New models and tools will be developed to enable the livestock industry to decrease environmental damage from methane and nitrogen emissions, and to improve efficiency of feed utilisation. A large-scale genetic association study involving 1000 dairy cows will relate feed intake, digestion efficiency, milk production/ composition and methane emissions to the ruminal microbiome and host genome, leading to new indicator traits and tools for use in both traditional and genomic selection. Cow-reindeer metagenomic studies will establish how host species influence ruminal microbiology and function. Bovine twins studies will define how the rumen microbiome varies in an identical host genetic background. Nutrition work will assess how dietary oils, nitrogen and carbohydrates affect the ruminal microbiome and product quality. A meta-barcoding 16S rRNA analysis protocol will be developed to investigate ruminal microbiomes more accurately, rapidly and cheaply. Saliva and faeces will be analysed as possible tools for non-invasive assessment of ruminal microbiome and function. A novel method for on-farm methane analysis will be refined for easy application. Results will be publicly available through an online data warehouse that will provide tools to build new queries and create novel information. Transversal work packages include dissemination and industrial liaison, targeted towards the enlarged EU, and candidate and developing countries.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,974,674.00

PROJECT N°

289319

DURATION

48 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
2. PARCO TECNOLOGICO PADANO S.R.L. (IT)
3. MAA JA ELINTARVIKETA LOUDEN TUTKIMUSKESKUS (FI)
4. SVERIGES LANTBRUKSUNIVERSITET (SE)
5. THE UNIVERSITY OF NOTTINGHAM (UK)
6. USTAV ZIVOCISNE FYZIOLOGIE A GENETIKY AV CR, V.V.I. (CZ)
7. UNIVERSITA CATTOLICA DEL SACRO CUORE (IT)
8. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
9. EUROPEAN ASSOCIATION FOR ANIMAL PRODUCTION (IT)
10. EUROPEAN FORUM OF FARM ANIMAL BREEDERS (NL)
11. QUALITY MEAT SCOTLAND (UK)

FP7-KBBE-2011-5

RUMINOMICS

Efficiency of ruminant digestive systems and reduction of the ecological footprint through a combination of systems biology, 'omics' and nutrition

www.ruminomics.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

SPICY



Smart tools for Prediction and Improvement of Crop Yield

The aim of this project is to develop a suite of tools for molecular breeding of crop plants for sustainable and competitive agriculture. The tools help the breeder in predicting phenotypic response of genotypes for complex traits under a range of environmental conditions. Pepper will be used as a model crop.

The idea is to use a crop growth model as a tool to predict the phenotypic response of a genotype under different environmental conditions and to use genetic markers in the QTL regions to estimate the genotype specific model parameters. We will adapt an existing growth model to cope with genotype specific information. Specific QTL-analysis methods will be developed as a tool to find the corresponding QTL for the crop growth parameters.

QTL can be used directly in marker assisted breeding, but it would be more interesting to find the genes in the QTL region, which account for the genotypic differences of the model parameters. These genes will help to unravel the genetic basis of complex traits such as yield. In this project two approaches will be used to find these genes: candidate gene finding, using known genes from other species, and differential gene expression.

Molecular breeding will not completely replace large scale phenotyping. Hence, automated and fast high-throughput tools to reduce the amount of manual labour necessary in phenotyping experiments are called for. In this project an image analysis tool and a fluorescence tool will be developed to measure large numbers of phenotypic traits automatically.

In the last year of the project a validation experiment will be conducted to show the potential use of the total concept developed in this study and the potential impact of every single tool or technique.

Dissemination of results to plant breeding industry will be done in close cooperation with an industrial advisory board and will involve specialized workshops and a molecular breeding course as well as lectures, papers and website.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,872,960.00

PROJECT N°

211347

DURATION

54 months

PROJECT START DATE

April 2008

LIST OF PARTNERS

1. WAGENINGEN UNIVERSITEIT (NL)
2. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
3. VIB (BE)
4. THE SCOTTISH CROP RESEARCH INSTITUTE (UK)
5. BUDAPESTI MUSZAKI ES GAZDASAGTUDOMANYI EGYETEM (HU)
6. FUNDACION CAJAMAR (ES)
7. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

FP7-KBBE-2007-1

SPICY

Development of new tools and processes to support R&D in crop plants: molecular breeding

www.spicyweb.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

TIMET



Linking the clock to metabolism

Optimal plant growth requires the orchestration of carbon metabolism over the day-night cycle, to avoid periods of starvation at night. Metabolism and growth at night are fueled by carbohydrates released by degradation of starch, synthesised from photosynthesis in the preceding day. Starch synthesis and degradation are regulated such that starch reserves are almost but not quite exhausted at the end of the night, in both long and short nights. We have recently found that this robust regulation is a function of the circadian clock, an endogenous timer that allows plants to anticipate and prepare for daily changes in their environment, and a paradigm for Systems Biology. The clock controls the rate of starch degradation at night, so that reserves last until the anticipated dawn. Starvation and growth arrest are avoided. This important discovery opens the way to new levels of understanding of the control of plant growth and productivity. TIMet assembles world leaders in experimental and theoretical plant Systems Biology to understand the regulatory interactions between the clock gene circuit and metabolism, and their emergent effects on growth and productivity. In addition to starch metabolism, we will study isoprenoid synthesis, an essential metabolic process linking starch metabolism to growth and development. Jointly-conducted experiments will use responses to day-length and light-quality regimes that perturb clock function, and a large set of mutants deficient in clock or central metabolic functions. High throughput technologies will enable study of transcriptional, post-transcriptional, translational and post-translational events, providing a depth of analysis hitherto unattained for either the clock or metabolism in plants. Innovative data mining and modelling platforms will underpin new, mechanistic models of each subsystem, will integrate them for the first time, and test the emergent effects of this dynamic system on plant growth rate and productivity.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,844,329.00

PROJECT N°

245143

DURATION

60 months

PROJECT START DATE

March 2010

LIST OF PARTNERS

1. THE UNIVERSITY OF EDINBURGH (UK)
2. JOHN INNES CENTRE (UK)
3. EIDGENÖSSISCHE TECHNISCHE HOCHSCHULE ZÜRICH (CH)
4. MAX PLANCK GESELLSCHAFT ZUR FÖRDERUNG DER WISSENSCHAFTEN E.V. (DE)
5. CENTRE DE RECERCA AGRIGENÒMICA CONSORCI CSIC-IRTA-UAB (CRAG) (ES)
6. SCOTTISH CROP RESEARCH INSTITUTE (UK)
7. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)

FP7-KBBE-2009-3

TIMET



Integration of tools to support a system-based understanding of complex biological processes

www.timing-metabolism.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-1 Enabling Research

WILDTECH



Novel Technologies for Surveillance of Emerging and Re-emerging Infections of Wildlife

With the increasing impact of mankind's activities on the natural environment, disease naturally harboured by wild animals, both within the geographical limits of the EU and elsewhere, are becoming increasingly significant both for public health and health of livestock, in addition to having direct concerns for wild animal species. We are proposing a project which will combine (i) technological development to enable high throughput arraybased screening of samples from a wide variety of wild animals with (ii) surveillance of terrestrial, aerial and marine wild animal species within Europe and from countries which act as portals of disease entry into the EU, (iii) epidemiological analysis and risk assessment using data generated during the project and from other sources, and (iv) development and proposal of a model framework for disease surveillance within Europe developed in parallel with the burgeoning systems in North America. The proposal will place the EU at the centre of wildlife disease surveillance and also enable the translation of high throughput array-based technologies into human and veterinary medicine.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,996,822.00

PROJECT N°

222633-2

DURATION

48 months

PROJECT START DATE

July 2009

LIST OF PARTNERS

1. THE UNIVERSITY OF NOTTINGHAM (UK)
2. THE INSTITUTE FOR ANIMAL HEALTH (UK)
3. FRIEDRICH LOEFFLER INSTITUT - BUNDESFORSCHUNGSINSTITUT FUER TIERGESUNDHEIT (DE)
4. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
5. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
6. ALERE TECHNOLOGIES GMBH (DE)
7. KENTRO EREVNAS TECHNOLOGIAS KAI ANAPTYXIS THESSALIAS (EL)
8. STATENS VETERINAERMEDICINSKA ANSTALT (SE)
9. HRVATSKI VETERINARSKI INSTITUT (HR)
10. THE SCOTTISH AGRICULTURAL COLLEGE (UK)
11. UNIVERSITY OF SASKATCHEWAN (CA)
12. TWYGCROSS ZOO EAST MIDLAND ZOOLOGICAL SOCIETY LIMITED (UK)
13. INSTITUT D'ENSEIGNEMENT SUPERIEUR ET DE RECHERCHE EN ALIMENTATION SANTE ANIMALE SCIENCES AGRONOMIQUES ET DE L'ENVIRONNEMENT VETAGRO SUP (FR)

FP7-KBBE-2007-2A

WILDTECH



Using new technologies to identify (re-)emerging pathogens from wildlife reservoirs

www.wildtechproject.com



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

ADAPTAWHEAT



Genetics and physiology of wheat development to flowering: tools to breed for improved adaptation and yield potential

ADAPTAWHEAT will show how flowering time variation can be exploited for the genetic improvement of the European wheat crop to optimise adaptation and performance in the light of predicted climate change. It will test current hypotheses that postulate specific changes in ear emergence and the timing and duration of developmental phases, which are thought of as components of ear emergence, will improve wheat productivity. Precise genetic stocks varying in specific flowering time elements and subjected to genotyping and characterisation with diagnostic markers for key flowering time genes will be used to test these hypotheses. They will be phenotyped at the molecular (transcript abundance), physiological (growth stage dissection) and agronomic (yield components) levels in multiple field trials located at sites in Europe that represent regional agricultural diversity and at non European locations that have mega environments of relevance. Controlled environment experiments will investigate specific environmental interactions including day length, ambient temperature, and heat stress. Data analysis will aid the construction of new wheat flowering models that can be used to refine existing hypotheses.

They will allow standing genetic variation for flowering time in European germplasm to be deployed more efficiently in wheat breeding programmes. This knowledge will be used to inform searches for specific phenotypic and molecular variants in diverse and non adapted wheat germplasm panels provided by consortium members. Vital novel genetic variation will be efficiently imported into the germplasm of European wheat breeders. The project will deliver new diagnostic markers for genotyping, molecular reporters for novel breeding selection strategies and the tools and knowledge necessary for a combined physiology and genomics led predictive wheat breeding programme. A conduit for these outcomes will be three SMEs, who will exploit the tools developed to deliver these outcomes.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

3,000,000.00

PROJECT N°

289842

DURATION

48 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. JOHN INNES CENTRE (UK)
2. UNIVERSIDAD DE LLEIDA (ES)
3. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
4. LEIBNIZ - INSTITUT FUER PFLANZENGENETIK UND KULTURPFLANZENFORSCHUNG (DE)
5. AGRICULTURAL RESEARCH INSTITUTE OF THE HUNGARIAN ACADEMY OF SCIENCES (HU)
6. KØBENHAVNS UNIVERSITET (DK)
7. VYZKUMNY USTAV ROSTLINNE VYROBY (CZ)
8. MINISTRY OF EDUCATION AND SCIENCE (KZ)
9. CONSEJO NACIONAL DE INVESTIGACIONES CIENTIFICAS Y TECNICAS (AR)
10. CENTRO INTERNACIONAL DE MEJORAMIENTO DE MAIZ Y TRIGO INT (MX)
11. COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION (AU)
12. SOCIETE RAGT 2N SAS (FR)
13. SEMILLAS BATLLE SA (ES)
14. INSTITUT ZA RATARSTVO I POVRTARSTVO (RS)
15. TRAITGENETICS GMBH (DE)
16. KWS LOCHOW GMBH (DE)
17. LIMAGRAIN UK LIMITED (UK)
18. ARVALIS INSTITUT DU VEGETAL (FR)
19. SELGEN AS (CZ)
20. ROTHAMSTED RESEARCH LIMITED (UK)

FP7-KBBE-2011-5

ADAPTAWHEAT

Translating knowledge on flowering time to
improve breeding efficiency

www.jic.ac.uk/ADAPTAWHEAT/



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(agriculture, forestry); plant health and crop protection

ANIMALCHANGE



AN Integration of Mitigation and Adaptation options for sustainable Livestock production under climate CHANGE

ANIMALCHANGE will provide scientific guidance on the integration of adaptation and mitigation objectives and design sustainable development pathways for livestock production in Europe, in Northern and Sub-Saharan Africa and Latin America. ANIMALCHANGE will inform public policy development in EU27 and propose cooperation programs addressing smallholder livestock farming in selected developing countries. The core analytical spine of the project is a series of coupled biophysical and socio-economic models combined with experimentation. This allows exploring future scenarios for the livestock sector under baseline and atmospheric CO₂ stabilization scenarios. These scenarios are first constructed in Component (CP) 1. They are elaborated and enriched by breakthrough mitigation and adaptation options from CP 2 at field and animal scales, integrated and evaluated at farm scale in CP 3 and used to assess policy options and their socio-economic consequences in CP 4.

ANIMALCHANGE will:

- Quantify and reduce uncertainties in greenhouse gas (GHG) emissions and assess climate change impacts on livestock systems (including grasslands)
- Revise estimates of the GHG balance of livestock systems and integrate soil carbon sequestration
- Integrate climate variability and extremes into the assessment of impacts, adaptation and vulnerability of livestock systems to climate change
- Develop breakthrough technologies for adaptation and mitigation to climate change for both ruminants and monogastrics
- Study and quantify trade-offs and synergies between adaptation and mitigation options
- Assess the potential societal and sectoral costs and benefits of these options for the livestock sector in Europe and in study regions of Africa and Latin America
- Assess climate change vulnerability of animal production and of associated GHG emissions
- Provide direct support through the design of an integrated and consistent mitigation and adaptation policy framework for the livestock sector.

Integrating mitigation and adaptation
options for sustainable livestock
production under climate change – SICA
(Latin America, African Mediterranean
Partner Countries, African ACP)

www.animalchange.eu

FP7-KBBE-2010-4

ANIMALCHANGE



PROJECT COORDINATOR

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FUNDING SCHEME CP

EC CONTRIBUTION € 8,999,535.00

PROJECT N° 266018

DURATION 48 months

PROJECT START DATE March 2011

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. AARHUS UNIVERSITET (DK)
3. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
4. UNIVERSIDAD POLITECNICA DE MADRID (ES)
5. ABERYSTWYTH UNIVERSITY (UK)
6. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
7. SZENT ISTVAN EGYETEM (HU)
8. CENTRE DE COOPERATION INTERNATIONALE EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
9. EIDGENOESSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT (CH)
10. THE SCOTTISH AGRICULTURAL COLLEGE (UK)
11. COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (FR)
12. INTERNATIONALES INSTITUT FUER ANGEWANDTE SYSTEMANALYSE (AT)
13. INRA TRANSFERT S.A. (FR)
14. PROVIMI HOLDING BV (NL)
15. FERTIPRADO SEMENTES E NUTRIENTES, LDA (PT)
16. UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL (BR)
17. EMPRESA BRASILEIRA DE PESQUISA AGROPECUARIA (BR)
18. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE DE TUNISIE (TN)
19. INSTITUT SENEGALAIS DE RECHERCHES AGRICOLES (SN)
20. UNIVERSITY OF PRETORIA (ZA)
21. INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE (KE)
22. AGRESEARCH LIMITED (NZ)
23. EUROPEAN ASSOCIATION FOR ANIMAL PRODUCTION (IT)
24. FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS FAO (IT)
25. JRC - JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

ARANGE



Advanced multifunctional forest management in European mountain ranges

The sustainable provision of ecosystem services (ES) in and from mountain regions is of crucial importance to an array of stakeholders and society in general, going much beyond the interests of particular landowners in the mountain regions themselves. Mountain ecosystems can only continue to provide all these services in a rapidly changing world if a wide array of ES is considered in forest management at local, landscape and regional scales (multi-functionality). The project builds on seven case study regions in major mountain ranges throughout Europe covering a wide range of forest types, socio-economic conditions and cultural contexts and seeks to develop and evaluate strategies for their multifunctional management considering risks and uncertainty due to changing climatic and socio-economic conditions. The project addresses four main ES: timber production, protection against gravitational natural hazards, the role of forests in climate change mitigation via carbon sequestration as well as bioenergy production, and nature conservation and the maintenance of biodiversity. Non-timber forest products, recreation as well as use of forested landscapes by game and livestock species will be dealt with as well. To analyse conflicts and complementarities among ES from stand to landscape scales, improved models for the assessment and projection of ecosystem services as well as novel planning and decision support tools will be developed together with SMEs and applied in the case study regions. Stakeholder panels in all study regions will inform research activities and contribute to the development of improved mountain forest management approaches. SME partners play a key role in the development of new planning tools. Ultimately, ARANGE will translate project findings on the efficient provision of multiple ES from mountain forests into decision support for policy makers and forest practitioners, so as to improve the robustness of planning tools in real-world decision making.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,991,077.00

PROJECT N°

289437

DURATION

36 months

PROJECT START DATE

February 2012

LIST OF PARTNERS

1. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
2. EIDGENÖSSISCHE TECHNISCHE HOCHSCHULE ZÜRICH (CH)
3. CENTRE NATIONAL DU MACHINISME AGRICOLE, DU GENIE RURAL, DES EAUX ET DES FORETS (FR)
4. TECHNISCHE UNIVERSITAET MUENCHEN (DE)
5. SVERIGES LANTBRUKSUNIVERSITET (SE)
6. UNIVERZA V LJUBLJANI (SI)
7. NARODNE LESNICKE CENTRUM (SK)
8. INSTITUT ZA GORATA - BAN (BG)
9. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
10. EUROPEAN FOREST INSTITUTE (FI)
11. UNIVERSITAET GRAZ (AT)
12. IFER - USTAV PRO VYZKUM LESNICH EKOSYSTEMU, S.R.O. (CZ)
13. GEOEXPERT RESEARCH AND PLANNING GMBH (AT)
14. STICHTING BIRDLIFE EUROPE (NL)
15. ARANZADA GESTION FORESTAL SLP (ES)
16. DR. STEPHEN MATTHEW WEBB (AT)

FP7-KBBE-2011-5

ARANGE



Preserving the multifunctionality of European Mountain forests

www.arange-project.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

ARIMNET



Coordination of Agricultural Research in the Mediterranean

Agricultural research in the Mediterranean is characterised by three main features: it is scattered within the EU members and in Mediterranean Partner Countries as well as most of the problems and challenges that the Mediterranean agriculture is facing are shared by all the countries in the area and even further, its objectives are largely the same in the whole area, even if priorities can vary from one country to another; the conditions resulting from climate change as well as the objective of sustainable development and production need to rethink agricultural research in all the countries and to begin its alignment in the whole area to increase its impact. This situation allows and requires a coordination action at the level of the Mediterranean (among EU members and between them and the other Mediterranean countries) to fight against fragmentation in fostering the convergence of national programmes and in founding a new critical mass to address the key issues (such as the growing demand for safer, healthier and higher quality food; the sustainable production and use of renewable bio-resources; threats to the sustainability and security of agricultural and fisheries production resulting in particular from climate change), to increase excellence and relevance of research, to enhance and strengthen the cooperation within the region in sharing the objectives and the priorities. These are the aims of the proposal of an ERA-Net as a European Initiative for Coordination of Agricultural Research in the Mediterranean (ARIMNet) which bears clearly a double ambition: to enhance coordination of agricultural research programmes within the Mediterranean area and to improve the cooperation within the area. It is gathering twelve countries (6 EU members, 2 associated country and 4 other Mediterranean countries) and the programmes that could be under the coordination action are gathering more than 3000 researchers and 300 million euros per year.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

1,000,000.00

PROJECT N°

219262

DURATION

48 months

PROJECT START DATE

October 2008

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. CENTRE DE COOPERATION INTERNATIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
3. MINISTERO DELLE POLITICHE AGRICOLE ALIMENTARI E FORESTALI (IT)
4. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE D ALGERIE (DZ)
5. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
6. MINISTRY OF FOOD AGRICULTURE AND LIVESTOCK (TR)
7. THE AGRICULTURAL RESEARCH CENTER (EG)
8. FUNDAÇÃO PARA A CIÊNCIA E A TECNOLOGIA (PT)
9. INSTITUT AGRONOMIQUE ET VETERINAIRE HASSAN II (MA)
10. HELLENIKOS GEORGIKOS ORGANISMOS. DIMITRA (HELLENIC AGRICULTURAL ORGANIZATION. DEMETER) (EL)
11. INSTITUTION DE LA RECHERCHE ET DE L'ENSEIGNEMENT SUPERIEUR AGRICOLES (TN)
12. MINISTRY OF AGRICULTURE, NATURAL RESOURCES AND ENVIRONMENT OF CYPRUS (CY)
13. MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT (IL)
14. NATIONAL AGRICULTURAL RESEARCH FOUNDATION (EL)

FP7-ERANET-2007-RTD

ARIMNET



Coordination of Agricultural Research
in the Mediterranean

www.arimnet.net



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

BACCARA



Biodiversity And Climate Change, A Risk Analysis

The effect of climate change on forest biodiversity will be evaluated through better understanding of the ecological processes that shape species composition and are particularly sensitive to climate conditions. Forest species composition will correspond to the assemblage of tree species and both symbiotic and antagonistic species that can drive tree species composition. Climate conditions will include both average and extreme values of climatic variables (e.g. temperature, humidity and wind).

The relationships between forest biodiversity and functioning will be deciphered through better understanding of the respective role of tree species richness and composition and by focussing on the biotic interactions between species. As the fundamental ecological hypothesis behind the diversity – productivity relationship is the optimal use of resources, we will analyse the energy flow (i.e. resources production and consumption) across different trophic levels (trees and symbiotic organisms as producers, herbivores and pathogens as consumers).

In a final step we will aggregate the information from the first two steps to predict the effect of climate change on forest productivity through changes in tree species composition. The prediction will be expressed as a risk of dysfunction, in particular the risk of forest productivity loss. Traditionally, the risk for a given system is a function of hazard probability and system vulnerability to this hazard. In this case, hazards will be changes in average and extreme climatic conditions. Vulnerability will be the vulnerability to climate change of forest species that both shape forest composition and are the main drivers of forest biomass productivity.

In each step, we will focus on fundamental ecological processes at work so that to deliver more generic scientific outcomes that will allow easier generalization to diverse types of European forest or forest managers expectations than a case by case approach.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,998,014.00

PROJECT N°

226299

DURATION

48 months

PROJECT START DATE

January 2009

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
3. CAB INTERNATIONAL (UK)
4. CENTRE NATIONAL DU MACHINISME AGRICOLE, DU GENIE RURAL, DES EAUX ET DES FORETS (FR)
5. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
6. EIDGENÖSSISCHE TECHNISCHE HOCHSCHULE ZÜRICH (CH)
7. INRA TRANSFERT S.A. (FR)
8. INSTYTUT BADAWCZY LESNICTWA (PL)
9. PEKING UNIVERSITY (CN)
10. ROYAL HOLLOWAY AND BEDFORD NEW COLLEGE (UK)
11. SVERIGES LANTBRUKSUNIVERSITET (SE)
12. UNIVERSITA DEGLI STUDI DELLA TUSCIA (IT)
13. UNIVERSITA DEGLI STUDI DI PADOVA (IT)
14. UNIVERSITAET ZUERICH (CH)
15. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
16. ALBERT-LUDWIGS-UNIVERSITAET FREIBURG (DE)

FP7-KBBE-2008-2B

BACCARA

Forecasting forest diversity under the influence of climatic changes and the consequences for stability and productivity of forest ecosystems

www.baccara-project.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(agriculture, forestry); plant health and crop protection

BENWOOD



Coordination Actions in Support Of Sustainable And Eco-Efficient Short Rotation Forestry In CDM Countries

The project first assesses the state of the art of SRF as a biofuel source in CDM and JI countries (WP1) focuses on CDM countries (WP2) and links the project to current European and non-European R&D-activities in the area (WP3).

Main outputs:

- 1) SRF guidelines and standards for land use management (WP4) for farmers and European JI/CDM project developers as well as stakeholders from the energy and biomass sector (electric utilities, pulp & paper, fibreboard etc.)
- 2) a SRF R&D agenda (WP5) for researchers and industry (boiler, oven, chipper, press producers etc.)

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

998,782.00

PROJECT N°

227321

DURATION

29 months

PROJECT START DATE

April 2009

LIST OF PARTNERS

1. ENERGIEAUTARK CONSULTING GMBH (AT)
2. ALASIA NEW CLONES S.R.L (IT)
3. KOCHANSKA-DUBAS JOLANTA WENA
KOCHANSKA-DUBAS JOLANTA WENA (PL)
4. FACULTY OF FORESTRY, UNIVERSITY OF ZAGREB (HR)
5. GEORG-AUGUST-UNIVERSITAET GOETTINGEN
STIFTUNG OEFFENTLICHEN RECHTS (DE)
6. KOMPETENZENTRUM HESSENROHSTOFFE
(HERO) E.V. (DE)
7. PUNJAB AGRICULTURAL UNIVERSITY (IN)
8. PLANTAR S/A (BR)
9. BIOENERGY 2020+ GMBH (AT)
10. SVERIGES LANTBRUKSUNIVERSITET (SE)
11. BANGOR UNIVERSITY (UK)
12. INTERNATIONAL CENTRE FOR RESEARCH IN
AGROFORESTRY (KE)
13. BEIJING FORESTRY UNIVERSITY (CN)
14. UNIVERSITAET FUER BODENKULTUR WIEN (AT)

FP7-KBBE-2008-2B

BENWOOD



Forest energy – Short rotation forestry
as a sustainable and eco-efficient land
use management system for fossil fuels
substitution within CDM-projects

www.benwood.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(agriculture, forestry); plant health and crop protection

BIOBIO



Indicators for biodiversity in organic and low-input farming systems

Organic and low-input farming systems have been shown to benefit farmland biodiversity although a generic indicator system to assess these benefits at the European level is lacking. The BIOBIO project will therefore pursue the following objectives:

1. Conceptualization of criteria for a scientifically-based selection of biodiversity indicators for organic/low-input farming systems;
2. Assessment and validation of a set of candidate biodiversity indicators in representative case studies across Europe (and in ICPC countries);
3. Preparation of guidelines for the implementation of biodiversity indicators for organic/low-input farming systems for Europe and beyond.

Existing indirect farm management indicators as well as direct indicators for genetic, species and habitat diversity will be assessed for their scientific soundness, practicality, geographic scope and usefulness for stakeholders. Candidate indicators will be tested in a standardised design in twelve case studies across Europe and later in three ICPC countries. Case study regions will include pannonian, alpine, boreal, Atlantic and Mediterranean grassland systems (both organic and/or low-input), rain fed organic farms under temperate and Mediterranean conditions, mixed organic farming, organic special crops and low-input tree/agroforestry systems. Plot, farm and regional scales (where applicable) will be addressed. The investigation will include new agricultural practices, e.g. soil conservation, crop rotation management, seed and crop mixtures and economic issues relating to the costs of indicator measurement and to benefits of biodiversity as perceived by different groups of the population. Stakeholders (farming communities, conservation NGOs, administrators) will be integrated at critical stages of the indicator selection process. A handbook with factsheets will be produced for validated indicators and a sampling design for biodiversity monitoring in organic and low-input farming systems across Europe.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,614.00

PROJECT N°

227161

DURATION

42 months

PROJECT START DATE

March 2009

LIST OF PARTNERS

1. EIDGENOESSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT (CH)
2. SZENT ISTVAN EGYETEM (HU)
3. ABERYSTWYTH UNIVERSITY (UK)
4. NORSK INSTITUTT FOR SKOG OG LANDSKAP (NO)
5. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
6. TECHNISCHE UNIVERSITAET MUENCHEN (DE)
7. UNIVERSIDAD DE EXTREMADURA (ES)
8. UNIVERSITA DEGLI STUDI DI PADOVA (IT)
9. SOLAGRO ASSOCIATION (FR)
10. INSTITUTE OF PLANT GENETIC RESOURCES (BG)
11. ALMA MATER STUDIOIUM-UNIVERSITA DI BOLOGNA (IT)
12. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
13. BILA TSERKVA NATIONAL AGRARIAN UNIVERSITY (UA)
14. INSTITUT NATIONAL DE RECHERCHES EN GENIE RURAL, EAUX ET FORETS (TN)
15. MAKERERE UNIVERSITY (UG)
16. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

FP7-KBBE-2008-2B

BIOBIO



Development of appropriate indicators of the relationship between organic/low-input farming and biodiversity

www.biobio-indicator.org



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(agriculture, forestry); plant health and crop protection

BIOFECTOR



Resource Preservation by Application of BIOeffECTORs in European Crop Production

BIOFECTOR is an integrated project that develops alternative fertilisation strategies by the use of various bio-effectors (BEs, plant growth promoting microorganisms and natural extraction products). BEs stimulate root growth, solubilise and mineralise sparingly available nutrients, or protect plants from abiotic and biotic stresses. Novel BEs will be isolated, characterized and applied in strategic combination with alternative fertilisation strategies that include organic and low-input farming, use of waste recycling fertilizers, and fertiliser-placement technologies.

Bio-effectors addressed comprise fungal strains of *Trichoderma*, *Penicillium* and *Sebacinales*, as well as bacterial strains of *Bacillus* and *Pseudomonades* with well-characterized root growth promoting and nutrient solubilising potential. Natural extraction products of seaweed, compost and plant extracts, as well as their purified active compounds are also tested in various combinations. Maize, wheat and tomato are chosen as representative crops. Laboratory and European-wide field experiments assure product adaptation to diverse geo-climatic conditions. Viable alternatives to the conventional practice of mineral fertilisation are developed, towards environmental friendly agricultural practice with reduced agrochemical input.

FP7-KBBE-2012-6-singlestage

BIOFECTOR



Plant growth-promoting bio-effectors
(microorganisms and active natural
compounds) for alternative plant nutrition
strategies in non-leguminous crops

<http://biofactor.agrobiology.eu>



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,821.00

PROJECT N°

312117

DURATION

60 months

PROJECT START DATE

September 2012

LIST OF PARTNERS

1. UNIVERSITAET HOHENHEIM (DE)
2. JULIUS KUHN-INSTITUT BUNDESFORSCHUNGSINSTITUT FUR KULTURPFLANZEN (DE)
3. CESKA ZEMEDLSKA UNIVERZITA V PRAZE (CZ)
4. UNIVERSITATEA DE STIINTE AGRICOLE SI MEDICINA VETERINARA A BANATULUI DIN TIMISOARA (RO)
5. BUDAPESTI CORVINUS EGYETEM (HU)
6. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
7. UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II. (IT)
8. KØBENHAVNS UNIVERSITET (DK)
9. AGRIFOOD AND BIOSCIENCES INSTITUTE (UK)
10. BIOATLANTIS (IE)
11. HOCHSCHULE ANHALT (DE)
12. FORSCHUNGSINSTITUT FUR BIOLOGISCHENLANDBAU STIFTUNG (CH)
13. MADORA GMBH (DE)
14. ABITEP GMBH (DE)
15. ARBEITSGEMEINSCHAFT HUTTENKALK EV (DE)
16. GABO-MI GESELLSCHAFT FUR ABLAUFORGANISATION-MILLIARIUM MBH & CO KG GAB O (DE)
17. PROPHYTA BIOLOGISCHER PFLANZENSCHUTZ GMBH (DE)
18. SOURCON-PADENA GMBH & CO KG (DE)
19. FIBL PROJEKTE GMBH (DE)
20. THE AGRICULTURAL RESEARCH ORGANISATION OF ISRAEL - THE VOLCANI CENTRE (IL)
21. AGRIGES (IT)
22. KOMTEK SOLUTIONS APS (DK)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

BRIGHTANIMAL



Multidisciplinary Approach to Practical and Acceptable Precision Livestock Farming for SMEs in Europe and world-wide

Livestock farming has a major role to play in the decades to come. Rising protein intake in the developing countries as well as rising concern for animal health and welfare in the developed countries present serious challenges to farmers. Precision Livestock Farming (PLF) wants to return to the farmer to connect to individual animals or small animal groups in spite of growing intensification. PLF uses technology to give farmers additional hands, ears and eyes.

The EU funded Coordination and Support Action "BrightAnimal" set out in 2009 to assess what has been achieved so far in Precision Livestock Farming (PLF) and to highlight needs for future research in the area. The goal of BrightAnimal was to identify practical and acceptable PLF. This has been performed with a multi-disciplinary, team of experts from all 5 continents. In particular, the project team included experts on business and on ethics, as well as biologists and engineers.

The team developed and presented in several public conferences a series of recommendations for precision livestock farming. These recommendation cover pathways for marketing and penetration, research objectives, research fund expenditure distribution, transparency in the food business, a new farm evaluation scheme and education.

As the main result, the project has published a 200 page book on Acceptable and Practical Precision Livestock Farming. The book has been distributed to key researchers and institutions and will be made available for download as an e-book. It has a novel structure and should appeal to both people wanting to get an overview over the different subjects covered as well as to specialists. In addition to the book, the project also started a Wiki, as a web-home for PLF and its developments. A flyer was developed for farmers and distributed.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

997,425.00

PROJECT N°

227138

DURATION

24 months

PROJECT START DATE

May 2009

LIST OF PARTNERS

1. FOODREG TECHNOLOGY SL (ES)
2. SMARTIDENTIFICATION LTD (UK)
3. NOFIMA MARIN AS (NO)
4. BITLAND APS (DK)
5. EESTI MAAILIKOOLESTONIAN UNIVERSITY OF LIFE SCIENCES (EE)
6. INSTITUTE OF QUALITY STANDARDS & TESTING TECHNOLOGY FOR AGRO-PRODUCTS, CHINESE ACADEMY OF AGRICULTURAL SCIENCES (CN)
7. CONSUMER GOODS COUNCIL OF SOUTH AFRICA (ZA)
8. MINISTRY OF AGRICULTURE AND AGRO-BASED INDUSTRY (MY)
9. KASETSART UNIVERSITY (TH)
10. EMPRESA BRASILEIRA DE PESQUISA AGROPECUARIA (BR)
11. DEPARTMENT OF PRIMARY INDUSTRIES AND RESOURCES SOUTH AUSTRALIA (AU)
12. AALBORG UNIVERSITET (DK)

FP7-KBBE-2008-2B

New and converging technologies for Precision Livestock Farming in European animal production systems

BRIGHTANIMAL

www.brightanimal.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(agriculture, forestry); plant health and crop protection

CA2AFRICA



Conservation Agriculture in AFRICA: Analysing and FoReseeing its Impact - Comprehending its Adoption

Despite the growing efforts of research and extension programs on the promotion of conservation agriculture (CA), there has been limited success with adopting CA on smallholder farms in Africa. African farming systems are highly heterogeneous in terms of agro-ecological, socio-economical and cultural environments and opportunities for CA necessarily require local adaptation. Simulation models and modelling frameworks may be used to assist our ability to better understand and target innovative technologies such as CA within complex farming systems.

Over 30 months, the overall objective of this project is to assess and learn jointly from past and on-going CA experiences under which conditions and to what extent does CA strengthen the socio-economic position of landholders in Africa. For this purpose, a consortium comprising 10 highly experienced, complementary European, African and International partners has been assembled. It will develop an up-to-date knowledge database on CA practices in Africa. Biophysical, socioeconomic and conceptual models of innovation systems will be applied to a series of case studies across five regions in Africa to analyze the impact and adoption of CA at different scales (field, farm, region).

This will facilitate the identification of pathways to make models readily applicable for decision-makers in different African regions and under different conditions. It will allow to set the agenda for future research, development and promotion of CA in Africa.

Dissemination, networking and training will make the project outcomes highly accessible to the principal stakeholders (researchers, public and private extension services, farmer organisations, national and regional policymakers, private sector).

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,808.00

PROJECT N°

245347

DURATION

30 months

PROJECT START DATE

January 2010

LIST OF PARTNERS

1. CENTRE DE COOPERATION INTERNATIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
2. CENTRO INTERNACIONAL DE AGRICULTURA TROPICAL (CO)
3. LEIBNIZ-ZENTRUM FUER AGRARLANDSCHAFTSFORSCHUNG (ZALF) E.V. (DE)
4. AFRICAN CONSERVATION TILLAGE NETWORK (KE)
5. INTERNATIONAL CENTRE FOR AGRICULTURAL RESEARCH IN THE DRY AREAS (SY)
6. INSTITUTE DE L'ENVIRONNEMENT ET DE RESEARCHES AGRICOLES (BF)
7. CENTRO INTERNACIONAL DE MEJORAMIENTO DE MAIZ Y TRIGO INT (MX)
8. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (MA)
9. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
10. WAGENINGEN UNIVERSITEIT (NL)

FP7-KBBE-2009-3

CA2AFRICA



Impact and development of Conservation
Agriculture techniques in developing countries –
Mandatory ICPC (Africa)

<http://ca2africa.cirad.fr>



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(agriculture, forestry); plant health and crop protection

CATCH-C



Compatibility of Agricultural Management Practices and types of Farming in the EU to enhance Climate Change Mitigation and Soil Health

The Catch-C project assesses the farm-compatibility of 'Best Management Practices' (BMPs) that aim to promote productivity, climate change mitigation, and soil quality. These are the three overall goals of sustainable soil management. Catch-C will first (WP2) set up a typology of the main farm types and agro-ecological zones across Europe. This frame, coupled to a pan-European database of socio-economic and biophysical data, will be used for spatially organising the information collected on current management; and for up-scaling the impacts expected from changes in management. Biophysical impacts of management practices will be assessed (WP3) primarily from a large set of current field experiments, executed by the participants. BMPs will be formulated, along with their trade-offs and synergies between productivity, climate change mitigation, and soil quality. Farmers, however, often do not adopt BMPs. Identifying the barriers against adoption, and formulating ways to remove these, are core activities of the project (WP4). Catch-C will survey farmer views on BMPs in all participant countries, assess costs and benefits of implementation, identify technical and ecological bottlenecks preventing adoption, develop a decision support tool, and prioritize innovation requirements to address bottlenecks. Policy measures can promote adoption in various ways, such as voluntary measures, regulation, and economic incentives. In interaction with policy makers, Catch-C will develop (WP5) guidelines for policies that will support the adoption of BMPs; and that are consistent with regional agro-ecological and farming contexts. Dissemination (WP6) includes scientific publication; discussing project results with farmers and policy makers; making information about BMPs and their adoption available to a wider audience; and stimulating awareness about the pros and cons of BMPs for different farm types and environments via pilots in selected countries.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,960,679.00

PROJECT N°

289782

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. OSTERREICHISCHE AGENTUR FUR GESUNDHEIT UND ERNAHRUNGSSICHERHEIT GMBH (AT)
3. CENTRE NATIONAL DU MACHINISME AGRICOLE, DU GENIE RURAL, DES EAUX ET DES FORETS (FR)
4. UNIVERSIDAD DE CORDOBA (ES)
5. LEIBNIZ-INSTITUT FUR GEMUSE- UND ZIERPFLANZENBAU GROSSBEEREN/ERFURT EV (DE)
6. VLAAMS GEWEST (BE)
7. INSTYTUT UPRAWY NAWOZENIA I GLEBOZNAWSTWA, PANSTWOWY INSTYTUT BADAWCZY (PL)
8. UNIVERSITA DEGLI STUDI DI TORINO (IT)
9. WAGENINGEN UNIVERSITEIT (NL)
10. GEORG-AUGUST-UNIVERSITAET GOETTINGEN STIFTUNG OEFFENTLICHEN RECHTS (DE)
11. UNIVERSITA DEGLI STUDI DI MILANO (IT)
12. INSTITUTO ANDALUZ DE INVESTIGACION Y DE LA PRODUCCION ECOLOGICA (ES)

FP7-KBBE-2011-5

CATCH-C

Sustainable management of agricultural soils in Europe for enhancing food and feed production and contributing to climate change mitigation

www.catch-c.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(agriculture, forestry); plant health and crop protection

CO-FREE



Innovative strategies for copper-free low input and organic farming systems

The proposed project aims to develop innovative methods, tools and concepts for the replacement of copper in European organic and low input fruit, grapevine, potato, and tomato production systems. Copper-free production systems will be achieved by (i) providing alternative compounds, (ii) 'smart' application tools and (iii) by integrating these tools into traditional and novel copper-free crop production systems. The copper-free apple, grapevine, potato and tomato production systems will be (iv) evaluated in a multi-criteria assessment with respect to agronomic, ecologic and economic performance. CO-FREE will also develop strategies to develop (v) 'smart' breeding goals by development of crop ideotypes and (vi) foster consumer acceptance of novel disease-resistant cultivars by consumers and retailers. By involving farmers, advisors, plant protection industry, policy makers and researchers as well as the stakeholders of the European organic and low input sector (food supply chain, retailers, producers associations), CO-FREE will ensure a rapid development, dissemination and adoption of the copper replacement strategies. The multidisciplinary consortium proposed for the project includes 11 academic and 10 industry (all SMEs) partners from 11 European countries. All partner institutions are leaders in their respective fields and/or are leading providers of advisory services to farmers, retailers, policy makers and other stakeholders in the organic and low input sector.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,895.00

PROJECT N°

289497

DURATION

54 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. JULIUS KUHN-INSTITUT
BUNDESFORSCHUNGSINSTITUT FUR
KULTURPFLANZEN (DE)
2. FORSCHUNGSINSTITUT FUR
BIOLOGISCHENLANDBAU STIFTUNG (CH)
3. FONDAZIONE EDMUND MACH (IT)
4. STICHTING DIENST LANDBOUWKUNDIG
ONDERZOEK (NL)
5. BENAKI PHYTOPATHOLOGICAL INSTITUTE (EL)
6. INSTITUT NATIONAL DE LA RECHERCHE
AGRONOMIQUE (FR)
7. INSTYTUT OCHRONY ROSLIN - PANSTOWY
INSTYTUT BADAWCZY (PL)
8. INSTITUT TECHNIQUE DE L AGRICULTURE
BIOLOGIQUE (FR)
9. CENTRO DI SPERIMENTAZIONE AGRARIA E
FORESTALE LAIMBURG AZIENDA (IT)
10. LOUIS BOLK INSTITUUT (NL)
11. UNIVERSITAET KASSEL (DE)
12. PROGRESSIVE FARMING TRUST LTD T/A THE
ORGANIC RESEARCH CENTRE (UK)
13. AKINAO SAS (FR)
14. AGRO-LEVURES ET DERIVES SAS (FR)
15. BIO FRUIT ADVIES BV (NL)
16. CERADIS BV (NL)
17. FYTOFEND SA (BE)
18. NOR-NATUR APS (DK)
19. SEAWEED CANARIAS SL (ES)
20. TRIFOLIO-M GMBH (DE)
21. E-NEMA GESELLSCHAFT FUER BIOTECHNOLOGIE
UND BIOLOGISCHEN PFLANZENSCHUTZ MBH (DE)

FP7-KBBE-2011-5

CO-FREE

Strategies to replace copper-based
products as plant protection products in
low input and organic farming systems

www.co-free.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(agriculture, forestry); plant health and crop protection

DROPS



Drought-tolerant yielding plants

DROPS develops novel methods and strategies aimed at yield improvement under fluctuating water deficits. Its premise is that any trait-related allele can have positive, negative or no effect depending on the drought scenario, thereby making necessary a knowledge-based stochastic approach (Physiology, Modelling, Genetics and Statistics). It aims at four target traits: seed abortion rate and vegetative growth maintenance in dry conditions, root system architecture and transpiration efficiency. It deals with maize and durum wheat, plus bread wheat for more specific tasks. DROPS :

- Develops new screens for identifying alleles that affect the target traits and their sensitivity to drought scenarios. Novel phenotyping methods result in indicators that (i) are stable characteristics of genotypes with a high heritability, (ii) are genetically related to the four target traits and to plant performance in the field.
- Explores the natural variation of the four target traits (association genetics), by identifying genomic regions that control them in diverse drought scenarios in phenotyping platforms and fields spread over Europe. We aim at (i) linking these traits to physiological pathways and genes or genomic regions (ii) assessing the effects of allelic diversity on the four target traits under a range of environmental scenarios.
- Supports crop improvement strategies by developing methods for estimating the comparative advantages of relevant alleles under contrasting European drought scenarios. This is performed by (i) developing a generic crop model incorporating novel understanding, enabling us to estimate the effects of alleles on crop growth, yield and water-use efficiency, (ii) simulating yields of genotypes that differ by traits or alleles at specific loci, over the variability of European drought scenarios.

Results are diffused via (i) the participation of four seed companies, (ii) a partnership with a breeder's association, (iii) hands-on courses and virtual courses through the website.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,866.00

PROJECT N°

244374

DURATION

60 months

PROJECT START DATE

July 2010

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. AUSTRALIAN CENTRE FOR PLANT FUNCTIONAL GENOMICS PTY LTD (AU)
3. BIOGEMMA (FR)
4. INRA TRANSFERT S.A. (FR)
5. KWS SAAT AG (DE)
6. LANCASTER UNIVERSITY (UK)
7. AGRICULTURAL RESEARCH INSTITUTE OF THE HUNGARIAN ACADEMY OF SCIENCES (HU)
8. MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. (DE)
9. PIONEER HI-BRED INTERNATIONAL, INC. (US)
10. SABANCI UNIVERSITY (TR)
11. SYNGENTA SEEDS SAS (FR)
12. ALMA MATER STUDIUM-UNIVERSITA DI BOLOGNA (IT)
13. UNIVERSITE CATHOLIQUE DE LOUVAIN (BE)
14. THE UNIVERSITY OF QUEENSLAND (AU)
15. WAGENINGEN UNIVERSITEIT (NL)

FP7-KBBE-2009-3

DROPS



Water stress tolerance and water use
efficiency in food crops

www.drops-project.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(agriculture, forestry); plant health and crop protection

EUBERRY



The sustainable improvement of European berry production, quality and nutritional value in a changing environment: Strawberries, Currants, Blackberries, Blueberries and Raspberries.

The main objective of the EUBerry project is to provide the necessary knowledge and tools to facilitate development of high quality, consumer-desirable fresh berry fruits of high nutritional quality optimal for human health at a competitive cost. The further objective is the development and validation of a set of tools to improve competitiveness of European berry production and consumer accessibility to berry fruits. The EUBerry platform will be developed and validated by using strawberry and raspberry and blueberry as model crop species. Additionally, specific critical points related to improvement of berry fruit quality and reduction of production costs will be considered also for currants and blackberries.

This project will apply the most recent technical advances in: a) Identifying germplasm of the main berry fruit genera appropriate for sustainable production throughout the EU, with respect to fruit quality and environmental adaptation and expanding use of modern breeding strategies to accelerate the release of new berry fruit cultivars into the future; b) Ensuring and expanding high-quality production systems to improve availability of high-quality fresh berries for consumers by focusing on the modern cultivation techniques for berry season extension, on adaptation to different cultivation conditions and systems, as well as to climate change, and on reducing the impact on environment in different European regions; c) Developing and applying validated methods to control and maintain fruit nutritional quality, improving shelf-life of fresh berries and increasing their availability to consumers; d) Developing economic studies to verify the impacts of the new technologies in increasing berry economic viability, farmer and consumer attractiveness; e) Disseminate and communicate the results to research scientists, academia, technical services, growers, market organizations, consumers, food industries, health authorities and regulatory and legislative authorities.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,999.00

PROJECT N°

265942

DURATION

42 months

PROJECT START DATE

May 2011

LIST OF PARTNERS

1. UNIVERSITA POLITECNICA DELLE MARCHE (IT)
2. INSTYTUT OGRODNICTWA (PL)
3. THE SCOTTISH CROP RESEARCH INSTITUTE (UK)
4. INSTITUTO DE BIOLOGIA EXPERIMENTAL E TECNOLÓGICA (PT)
5. INSTITUTO ANDALUZ DE INVESTIGACIONY FORMACION AGRARIA PESQUERA ALIMENTARIA Y DE LA PRODUCCION ECOLOGICA (ES)
6. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
7. MAA JA ELINTARVIKETALOUDEN TUTKIMUSKESKUS (FI)
8. NORWEGIAN INSTITUTE FOR AGRICULTURAL AND ENVIRONMENTAL RESEARCH - BIOFORSK (NO)
9. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
10. FORSCHUNGSANSTALT GEISENHEIM (DE)
11. SOCIEDAD COOPERATIVA ANDALUZA SANTA MARIA DE LA RABIDA (ES)
12. COOPERATIE KONINKLIJKE FRUITMASTERSGROEP U.A. (NL)
13. SANT'ORSOLA SOCIETA COOPERATIVA AGRICOLA (IT)
14. INSTITUTO NACIONAL DE RECURSOS BIOLÓGICOS I.P. INRB (PT)

FP7-KBBE-2010-4

EUBERRY

Improving European berries production, quality, nutraceutical and nutritional value (Strawberries, Currants, Blackberries, Blueberries and Raspberries)

www.euberry.univpm.it



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

EUPHOROS



Efficient use of input in protected horticulture

The four-years project EUPHOROS aims at developing a sustainable greenhouse system that: does not need any fossil energy & minimizes carbon footprint of equipment; with no waste of water nor emission of fertilizers and full recycling of the substrate; with minimal need of plant protective chemicals yet with high productivity and resource use efficiency. Three commodity-based work packages (WP) will develop a diversity of innovative tools and systems to reduce energy, water, fertilisers, pesticide consumption and waste. Another WP optimizes the growing environment, developing innovative but robust monitoring tools for performance assessment, early detection and response management. The balance between environment and economy is addressed in a dedicated WP, which will quantify the reduction of resource input and carbon footprint delivered by each component of this project, together with the financial/economic consequences.

Even an incremental adoption by the growers of the project results will increase competitiveness while reducing resource use of the European greenhouse production. A truly continental impact will be achieved by developing systems that are anchored in the local speciality of greenhouse industries and which are seen to respond to the diversity of climatic, economic and environmental constraints across Europe. This will be ensured by installing, testing, fine-tuning and evaluating locally relevant combinations of crops (tomato and/or rose), equipment, covering materials, cultivation techniques, monitoring and control systems in The Netherlands, Spain and Hungary. The participation of 5 commercial partners and a big growers' organization guarantees fast implementation of the most promising results. The involvement of local stakeholders to give feed-back, and extended dissemination activities, like national & international workshops and a training course, are included to ensure the convergence of project results with market expectations and acceptance.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,995,408.00

PROJECT N°

211457

DURATION

54 months

PROJECT START DATE

March 2008

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES. (ES)
3. UNIVERSITA DI PISA (IT)
4. THE UNIVERSITY OF WARWICK (UK)
5. FUNDACION CAJAMAR (ES)
6. PLANT RESEARCH INTERNATIONAL B.V. (NL)
7. SIA GROGLASS (LV)
8. HORTIMAX B.V. (NL)
9. PERLITE ITALIANA SRL (IT)
10. MORAKERT ZOLDSEG-GYUMOLCS TERMELOI ERTEKESJITO SZOVETKEZET (HU)
11. TERRA HUMANA TISZTA TECHNOLOGIAKAT FEJLESZTO TERVEZO ES KIVITELEZO KFT (HU)
12. BASF SCHWEIZ AG (CH)

FP7-KBBE-2007-1

EUPHOROS

Reducing the need for external inputs in high-value protected horticultural and ornamental crops

www.euphoros.wur.nl



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

EUROOT



Enhancing resource Uptake from Roots under stress in cereal crops under stress in cereal crops

The overall goal of EUroot is to help farmers to face both climate change, which is expected to result in increasingly uneven rainfall, and meet the societal demand for sustainable agriculture with reduced use of water and fertilizers. EUroot objective is to enhance the cereal plant capability to acquire water and nutrients through their roots and maintain growth and performance under stress conditions. Making use of joint phenotyping and modelling platforms, EUroot will conduct a suite of experiments designed to better understand and model: i. The genetic and functional bases of root traits involved in soil exploration and resource uptake, ii. The bio-geochemical properties of the soil, including beneficial association with mycorrhizal fungi, influencing extraction of nutrient and water by the root system and iii. The plant signalling processes involved in soil environment sensing and responsible for adaptive root system response enhancing soil exploration and resource acquisition. The EUroot project is based on a tripod of interactive WPs addressing specific complementary questions– i.e. WP1, genetics of root traits, WP2, root:soil interactions, WP3, root : shoot signalling-, and on two platforms WPs allowing to share innovative phenotyping methods relevant to field conditions and linked to crop performance (WP4) and multi scale modelling (WP5) aiming at integrating root architecture, resource dynamics in the soil and root uptake, and inner plant signalling processes, to design root ideotypes allowing enhanced resource acquisition under stress. Results will be readily translated into screening methods, models and tools (markers, biochemical signatures) to guide the challenging breeding for improved root traits allowing enhanced water and nutrient capture. It will allow the further development of novel cereal cultivars with higher resilience, tolerating erratic rainfalls and reduced fertilizer application, while achieving their yield potential.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,996.00

PROJECT N°

289300

DURATION

48 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. CENTRE DE COOPERATION INTERNATIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
2. CENTRE DE RECERCA AGRIGENOMICA CONSORCI CSIC-IRTA-UAB (CRAG) (ES)
3. EIDGENÖSSISCHE TECHNISCHE HOCHSCHULE ZÜRICH (CH)
4. FORSCHUNGSZENTRUM JUELICH GMBH (DE)
5. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
6. STICHTING KATHOLIEKE UNIVERSITEIT (NL)
7. RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITAET BONN (DE)
8. THE JAMES HUTTON INSTITUTE LBG (UK)
9. ALMA MATER STUDIURUM-UNIVERSITA DI BOLOGNA (IT)
10. UNIVERSITE CATHOLIQUE DE LOUVAIN (BE)
11. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
12. LANCASTER UNIVERSITY (UK)
13. THE UNIVERSITY OF NOTTINGHAM (UK)
14. UNIWERSYTET SLASKI (PL)
15. SOCIETA PRODUTTORI SEMENTI SPA (IT)
16. DELLEY SAMEN UND PFLANZEN AG (CH)
17. PRESENS PRECISION SENSING GMBH (DE)
18. AUSTRALIAN CENTRE FOR PLANT FUNCTIONAL GENOMICS PTY LTD (AU)
19. INCORPORATED ADMINISTRATIVE AGENCY JAPAN INTERNATIONAL RESEARCH CENTER FOR AGRICULTURAL SCIENCES (JP)
20. THE PENNSYLVANIA STATE UNIVERSITY (US)

FP7-KBBE-2011-5

EUROOT

Root signalling, growth and development under abiotic stress conditions

www.euroot.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

EUROPRUNING



Development and implementation of a new, and non existent, logistic chain on biomass from pruning

Agricultural residues could represent a good source of biomass to convert into energy in particular wherever it is impractical to convert cropland to energy crop cultivation. According to FAO's reportage (1997), large quantities of ligneous biomass can be obtained from pruning operations carried out in Mediterranean fruit plantations. Agricultural residues therefore play an important role in any analysis of biomass availability for a specific area. For this reason it is important to conduct a thorough study of the types of permanent crops in Europe and the potential of biomass obtained by its pruning.

There is a big potential market in pruning residues, mainly power generation but not only. Nowadays these types of residues are just taken apart from the field and used locally, "Leaving on the ground" a potential profitable business for farmers, logistic companies and final users. Nowadays the pruning means just a cost for the farmers, but with a new implemented logistic chain they could take advantage in order to sell this product in the biomass market and providing a new business model for logistic operators, biomass sellers and final users, which could find a bigger amount of resources and a decreasing of the costs. It already exists and implemented and developed logistic chain for straw residues, but there is not for pruning.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

3,413,075.00

PROJECT N°

312078

DURATION

39 months

PROJECT START DATE

April 2013

LIST OF PARTNERS

1. FUNDACION CIRCE CENTRO DE INVESTIGACION DE RECURSOS Y CONSUMOS ENERGETICOS (ES)
2. SVERIGES LANTBRUKSUNIVERSITET (SE)
3. LEIBNIZ-INSTITUT FUER AGRARTECHNIK POTSDAM-BORNIM EV (ATB) (DE)
4. CONSIGLIO PER LA RICERCA E SPERIMENTAZIONE IN AGRICOLTURA (IT)
5. UNIWERSYTET PRZYRODNICZY WE WROCLAWIU (PL)
6. GREENOVATE! EUROPE (BE)
7. COOPERATIVAS AGRO-ALIMENTARIAS DE ESPANA U. DE COOP. (ES)
8. GRUAS Y SERVICIOS GRUYSER SL (ES)
9. PRZEMYSLOWY INSTYTUT MASZYN ROLNICZYCH W POZNANIU (PL)
10. MITRAFOR SL (ES)
11. ONG SNC DI NALDONI DOMENICO E GIACOMETTI ROBERTO (IT)
12. WOLF-ANNO BISCHOFF (DE)
13. MOBITRON AB (SE)
14. COOP DE FRANCE ASSOCIATION (FR)
15. OBSTGUT MARQUARDT GBR (DE)
16. FEDERACIÓN ARAGONESA DE COOPERATIVAS AGRARIAS (ES)
17. SOCIETE COOPERATIVE AGRICOLE ET VINICOLE INTERCOMMUNALE LES VIGNERONS D'UNIMEDOC (FR)

FP7-KBBE-2012-6-singlestage

EUROPRUNING



Development of new or improved logistics for lignocellulosic biomass harvest, storage and transport

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

FERTIPLUS



FERTIPLUS Reducing mineral fertilisers and agro-chemicals by recycling treated organic waste as compost and bio-char products

FERTIPLUS will identify organic urban and farm wastes that can be used to recycle nutrients into agriculture as organic or mineral fertilizer from production of biochar, compost or combinations and energy. Urban and farm residues are a large source of nutrients and today not used to its full potential. FERTIPLUS will assess and use this potential and contribute to sustainable crop production and soil productivity and quality across regions in Europe. It will demonstrate effective innovative processing and application of biochar and compost. The biochar should have qualities beneficial to soils such that amendment (1) increases the efficiency of compost, chemical fertilizers and pesticides, (2) reduces greenhouse gas emissions and (3) increases carbon sequestration in soils and (4) yield bioenergy. FERTIPLUS will assess scenarios on amount and quality of organic wastes available within EU in the near future to identify and map their potential for recycling nutrients in biochar or compost.

Production processes for compost and biochar are reviewed and new technologies will be designed to obtain high quality biochar with functionalities related to site-specific targets of sustainable soil management. Compost and biochar amendments will be compared in lab and field trials for agronomical and environmental impacts (crop production, disease suppression, soil C sequestration, prevention of GHG emissions and leaching losses) and biofuel and energy balance. Results are used to complete a Life Cycle Analysis and define the best application practices for an effective and safe use of the final products that reduce the footprint of European cities and agriculture in an economically feasible way. The consortium combines the expertise needed for these goals and involve 6 SMEs to guarantee rapid implementation of results and innovations. Focused dissemination and communication include a website and brochure and meetings on innovations targeted to stakeholders and extension services.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,983,724.00

PROJECT N°

289853

DURATION

48 months

PROJECT START DATE

December 2011

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK - ALTERRA - WAGENINGEN UR (NL)
2. BAUHAUS-UNIVERSITAET WEIMAR (DE)
3. VLAAMS GEWEST - ILVO (BE)
4. UNIVERSITY OF LEEDS (UK)
5. ORGANIC WASTE SYSTEMS NV (BE)
6. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
7. CONSIGLIO PER LA RICERCA E SPERIMENTAZIONE IN AGRICOLTURA (IT)
8. IDCONSORTIUM SL (ES)
9. STICHTING ENERGIEONDERZOEK CENTRUM NEDERLAND - ECN - ENERGY RESEARCH CENTRE (NL)
10. GRAPHITE RESOURCES (KNIGHTSBRIDGE) LTD (UK)
11. FUNDACION PARA LAS TECNOLOGIAS AUXILIARES DE LA AGRICULTURA (ES)
12. PROININSO S.A (ES)
13. IRIS - ISONTINA RETI INTEGRATE E SERVIZI (IT)
14. GESTORA DE RESIDUOS DEL SUR S.L (ES)

FP7-KBBE-2011-5

FERTIPLUS

Reducing mineral fertilisers and chemicals use in agriculture by recycling treated organic waste as compost and bio-char products

www.fertiplus.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

FLEXWOOD



Flexible Wood Supply Chain

The FlexWood project (Flexible Wood Supply Chain, 2009-2012) will adapt and further develop existing processes to industrial needs for an improved and flexible wood supply chain under changing conditions. The outcome will lead to significant additional value and improved process efficiency throughout the wood supply chain, from forest to mill operations.

The overall objective is to build a novel logistic system, 'FlexWood', that will integrate:

- Advanced quality and quantity information on wood resources measured in the forest with novel technology (lasers);
- Optimisation models for tactical and operational planning (bucking, harvesting, allocation of wood), for novel and more flexible concepts for mill production and;
- Improved information transfer between stages of the wood supply chain to create new knowledge for decision making.

The tool will include, for example, the improved algorithms of wood resource allocation in remote sensing data and, therefore, provide more efficient information flow. With the FlexWood system, forest owners, as well as buyers will have a better understanding and knowledge of their available resources and can use the improved information base to plan logistics, acquisition, harvesting and selling. This will lead to better decision-making capabilities for all actors and a quicker, more flexible response to the changes in market demands and available supply. It can also provide an opportunity to better deal with the mobilisation of timber resources held by small scale private forests owners, which is a difficulty facing several European countries. The combination of terrestrial and aerial laser scanning, which will enable forest owners and authorities to plan and conduct their inventories in a much more cost-effective manner, will also be investigated.

Concerning enterprises, the main objectives are to improve (and facilitate) the raw material procurement of enterprises (in terms of quality and quantity): "bringing the most appropriate wood in connection to the enterprise's needs"; as well as test and validate new Information and Communication Technologies in the forest (aerial and terrestrial laser scanning). Lasers are used to assess wood raw material in the forest (quality and quantity) and to provide information on wood raw material availabilities to enterprises.

Overall, this enhanced wood supply chain will meet the market demands with novel, logistic concepts, providing an increase in amount and quality of information on wood resources and improved optimisation models. An increase in value recovery will result from the enhanced and faster response to the demands of the different industry sectors.

FP7-KBBE-2009-3

Meeting industrial requirements on wood raw-materials quality and quantity

FLEXWOOD

www.flexwood-eu.org



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,993,300.00

PROJECT N°

245136

DURATION

36 months

PROJECT START DATE

November 2009

LIST OF PARTNERS

1. ALBERT-LUDWIGS-UNIVERSITAET FREIBURG (DE)
2. STIFTELSEN SKOGSBRUKETS FORSKNINGSGRUPP - SKOGFORSK (SE)
3. INSTITUT TECHNOLOGIQUE FCBA (FORETCELLULOSE BOIS-CONSTRUCTION AMEUBLEMENT) (FR)
4. JOENSUUN YLIOPISTO (FI)
5. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
6. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
7. TREEMETRICS LTD (IE)
8. FÖRSTLICHE VERSUCHS- UND FORSCHUNGSANSTALT BADEN-WÜRTTEMBERG (DE)
9. UNIVERSITETET FOR MILJO OG BIOVITENSKAP (NO)
10. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
11. INSTYTUT BADAWCZY LESNICTWA (PL)
12. LOGICA SVERIGE AB (SE)
13. FORAN REMOTE SENSING AB (SE)
14. UNIVERSITE LAVAL (CA)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

FORMIT



FORest management strategies to enhance the MITigation potential of European forests

Forest management can lead to continuous carbon sequestration, while timber as a renewable energy source can be used as a substitute for fossil fuel, thus multiplying this mitigation effect. FORMIT aims to develop forest management scenarios for carbon sequestration in Europe, including mitigation measures and management strategies for different regions, and accounting for trade-offs with other forest functions. FORMIT will bring new insights into options for carbon storage in forests accounting for historical management practices, regional differences, and management scenarios and modes of operation. This includes options for biofuel use, links between biodiversity conservation and management strategies, and economics of timber production. Mitigation encompasses carbon storage in forests, carbon in forest products, and substitution of fossil fuel. Stand and forest type estimates will be scaled up to a European-wide assessment using available forest inventory data. Forest management options aimed at mitigation will be proposed, accounting for trade-offs between forest functions, and including selection of tree species and mixtures, rotation and silviculture techniques. Based on current knowledge, the expected impact of climate change on tree growth and forest functioning will be assessed, accounting for site differences and regional climate change. In quantifying and analysing the trade-offs between carbon mitigation strategies and other forest functions, we will involve a user panel with representatives of major forest management agencies and associations in Europe. The panel will also provide input for a multicriteria analysis to identify consistent and flexible scenarios for forest management. The project will deliver management options and implementation strategies for European forests, focusing on mitigation while safeguarding other forest functions, and accounting for regional differences in environmental and socio-economic conditions.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,978,197.00

PROJECT N°

311970

DURATION

48 months

PROJECT START DATE

October 2012

LIST OF PARTNERS

1. WAGENINGEN UNIVERSITEIT (NL)
2. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
3. UNIVERSITAET HAMBURG (DE)
4. UNIVERSITA DEGLI STUDI DEL MOLISE (IT)
5. HELSINGIN YLIOPISTO (FI)
6. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
7. CESKA ZEMEDELSKA UNIVERZITA V PRAZE (CZ)
8. UNIVERSITETET FOR MILJO OG BIOVITENSKAP (NO)
9. INSTITUT TECHNOLOGIQUE FCBA (FORETCELLULOSE BOIS-CONSTRUCTION AMEUBLEMENT) (FR)
10. UNIVERSITY STEFAN CEL MARE SUCEAVA (RO)
11. TARTU OBSERVATORY - ESTONIAN MINISTRY OF EDUCATION AND RESEARCH (EE)
12. SZKOLA GLOWNA GOSPODARSTWA WIEJSKIEGO (PL)

FP7-KBBE-2012-6-singlestage

Development of management strategies for planted and managed forests to increase mitigation capacity

FORMIT

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

FUNCITREE



Functional Diversity: An ecological framework for sustainable and adaptable agro-forestry systems in landscapes of semi-arid and arid eco-regions

The increasing demand of livestock products, larger climate uncertainty and resource degradation, and the rampant poverty of farmers in the semi-arid tropics call for modernized agro-forestry systems (AFS) capable of providing multiple functions.

FUNCITREE develops regionally specific, trait-based and field tested AFS capable of providing critical agro-ecosystem functions in semi-arid Africa and Central America. The primary objective is to provide farmers with a portfolio of regionally suitable tree and shrub species organized by their traits or attributes, in relation to the provisioning of multiple services, as perceived by the farmers and in terms of fundamental ecological functions.

FUNCITREE makes substantial contributions to AF and ecological science through its integration of theories and concepts from both fields, and thereby provides a scientifically based model for the design of modernized AFS.

FUNCITREE identifies and characterizes the main factors influencing the adoption/non adoption of AF in selected target areas. It improves the performance of AFS in dry and marginal areas with particular focus on how species can be assembled according to their traits to improve the multi-functionality of AFS and identifies the potential of new multipurpose tree species suitable for AF in dry and marginal areas by grouping these species according to their functional traits and their capacity to provide critical AFS services. FUNCITREE specifically enhances the synergies between the species traits and model how trait combinations contribute to the multi-functionality of AFS including soil, trees, crop/pasture and livestock.

FUNCITREE evaluates the short and medium environmental impacts of AF and its socio-economic implications through sophisticated interdisciplinary models and produces policy recommendations aimed at promoting AFS and related husbandry practices best adapted to specific local needs, yet universal in scope.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,903,597.00

PROJECT N°

227265

DURATION

48 months

PROJECT START DATE

May 2009

LIST OF PARTNERS

1. STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING (NO)
2. CENTRO AGRONOMOICO TROPICAL DE INVESTIGACION Y ENSEÑANZA CATIE (CR)
3. WAGENINGEN UNIVERSITEIT (NL)
4. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
5. CENTRE DE COOPERATION INTERNATIONALE EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
6. INSTITUT SENEGALAIS DE RECHERCHES AGRICOLES (SN)
7. INSTITUT D'ECONOMIE RURALE (ML)

FP7-KBBE-2008-2B

FUNCITREE

Improved agro-forestry systems for sustainable farming - SICA

<http://funcitree.nina.no>



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

INFRES



Innovative and effective technology and logistics for forest residual biomass supply in the EU

INFRES aims to accelerate the technological development and open new paths to EU's renewable targets by producing research based knowledge, technological solutions and service innovations for forest residue feedstock supply. INFRES aims at high efficiency and precise deliveries of woody feedstock to heat, power and biorefining industries by: Producing technological and logistic innovations for developing new harvesting, transport and storage technology for forest fuel procurement, Demonstrating new solutions in full supply chains from harvesting to transport and storage in real operational environment Spotting the technological, economic, regulatory and other bottlenecks in the innovation structures for the forest energy sector, Assessing the environmental, economical and social sustainability for the developed logistics including scenarios for different fuel sources, methods, technologies and transport distances and Disseminating the outcomes of research and demonstrations to the practices.

Project consortium has 23 partners including 9 leading forest energy research organizations of accompanied with 14 SME along the biomass supply chain. SME's include manufacturers of harvesting technology, chippers, feedstock supply enterprises, forest harvesting and transport providers, truck technology and IT service provider to manage fleet and storages. During the project INFRES develops and demonstrates technological and logistical solutions that decrease the fossil energy input in the biomass supply by 20% and reduces the raw material losses by 15%. The cost of supply can be reduced by 10-20% and precision of supply improves the economic outcome of CHP production by 10%. The CO₂ emissions of feedstock supply will diminish by 10%. With the novel technologies and efficient transfer of best practices between the countries in the consortium and other countries with similar natural conditions the volume of forest energy supply in EU27 by 2015 will be 30% higher than today.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

3,085,051.00

PROJECT N°

311881

DURATION

36 months

PROJECT START DATE

September 2012

LIST OF PARTNERS

1. METSANTUTKIMUSLAITOS (FI)
2. SVERIGES LANTBRUKSUNIVERSITET (SE)
3. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
4. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
5. EUROPEAN FOREST INSTITUTE (FI)
6. ALBERT-LUDWIGS-UNIVERSITAET FREIBURG (DE)
7. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
8. CENTRE TECNOLOGIC FORESTAL DE CATALUNYA (ES)
9. STIFTELSEN SKOGSBRUKETS FORSKNINGINSTITUT - SKOGFORSK (SE)
10. IFER - USTAV PRO VYZKUM LESNICH EKOSYSTEMU, S.R.O. (CZ)
11. B.T.G. BIOMASS TECHNOLOGY GROUP BV (NL)
12. VALENTINI SNC DI VALENTINI ILARIO EC (IT)
13. PEZZOLATO OFFICINE COSTRUZIONI MECCANICHE SPA (IT)
14. ELLETTARI LUCA SAS DI ELLETTARI LUCA EC (IT)
15. ECOMOND OY (FI)
16. SKOGSTEKNISKA KLUSTRET EKONOMISK FORENING (SE)
17. SERVEIS DEL CONSORCI FORESTAL DE CATALUNYA SCCL (ES)
18. JOHANN SCHWARZ (AT)
19. KESLA OYJ (FI)
20. KONEPAJA ANTTI RANTA (FI)
21. FALLERT ORTENAUER HOLZENERGIE GMBH & CO KG (DE)
22. FORSTWARE INFORMATIONSSYSTEME GMBH (DE)
23. SCHLEIMER TRANSPORT (DE)

FP7-KBBE-2012-6-singlestage

INFRES



Development of new or improved logistics for lignocellulosic biomass harvest, storage and transport

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

INNOVINE



Combining innovation in vineyard management and genetic diversity for a sustainable European viticulture

The strategic goal of the project is to help the European vineyard sector facing the increasingly global competition by meeting:

- Consumer demands for diversified high quality wines and concerns for food safety
- Citizens' requests for environment-friendly production systems involving decreased or no use of pesticides and spare of not renewable natural resources
- Producers' needs of plant material, tools and methods to help them cope with the negative impacts of climate change while responding to demands for quality, environmental friendliness and needs of profitability

To reach this overall goal, the project will:

- At the plant level, improve and design agricultural practices (canopy management, irrigation, fertilisation, training systems, pest and disease control, etc.) aimed at maximising berry quality, durable resistance to pests and diseases, and adaptation to climate change (higher CO₂, drought, UV light, and higher temperatures)
- At the vineyard level, design, develop and test innovative agronomic systems integrating new agricultural practices and taking into account the variability of constraints met by European vineyards grown under a wide range of environments
- At the breeding level, diversify grapevine varieties with regard to desirable adaptive traits building on tools and knowledge developed through international breeding and genomic initiatives.

The project will combine short, medium, and long-term approaches to respectively conceive innovative viticulture systems, design and test novel agronomic practices and decision support systems, and exploit the genetic diversity of grapevine that all together will ensure a progress towards sustainable viticulture.

FP7-KBBE-2012-6-singlestage

INNOVINE



Vineyard agronomic management and breeding for improved grape quality to reinforce competitiveness of the winegrowing sector

Website not available yet



PROJECT COORDINATOR

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FUNDING SCHEME CP

EC CONTRIBUTION € 5,999,990.00

PROJECT N°

311775

DURATION

48 months

PROJECT START DATE

January 2013

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. UNIVERSITE VICTOR SEGALEN BORDEAUX II (FR)
3. FORSCHUNGSANSTALT GEISENHEIM (DE)
4. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
5. INSTITUTO DE TECNOLOGIA QUIMICA E BIOLOGICA - UNIVERSIDADE NOVA DE LISBOA (PT)
6. INSTITUTO SUPERIOR DE AGRONOMIA (PT)
7. JULIUS KUHN-INSTITUT BUNDESFORSCHUNGSINSTITUT FUR KULTURPFLANZEN (DE)
8. PECSI TUDOMANYEGYETEM - UNIVERSITY OF PECS (HU)
9. ASSOCIAZIONE ISTITUTO DI GENOMICA APPLICATA (IT)
10. UNIVERSITA DEGLI STUDI DI VERONA (IT)
11. UNIVERSITA CATTOLICA DEL SACRO CUORE (IT)
12. UNIVERSITA DEGLI STUDI DI MILANO (IT)
13. INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE (FR)
14. AGROBIOINSTITUTE (BG)
15. HORTA SRL (IT)
16. ENTAV-ITV FRANCE (FR)
17. FORCE-A SA (FR)
18. AGRI-CIENCIA CONSULTORES DE ENGENHARIA LDA (PT)
19. BODEGAS RODA SA (ES)
20. NOVELTIS SAS (FR)
21. VINZAVOD AD (BG)
22. SCHLOSS VOLLRADS GMBH & CO. BESITZ KG (DE)
23. VINIDEA SRL (IT)
24. VIVEROS PROVEDO SA (ES)
25. MIGUEL TORRES SA (ES)
26. VIVAI COOPERATIVI RAUSCEDO SOCIETA COOPERATIVA AGRICOLA (IT)
27. INRA TRANSFERT S.A. (FR)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

ISEFOR



Increasing Sustainability of European Forests: Modelling for Security Against Invasive Pests and Pathogens under Climate Change

European forests are under unprecedented threat from the combined forces of climate change and large increases in the numbers of alien invasive pests and pathogens resulting from changes in patterns of global trade. Interactions between climate change, including likely changes in both mean temperatures and precipitation, will have serious impacts on the susceptibility of forest ecosystems to damage by pests and pathogens, and a large number of novel, unprecedented forest health problems are likely to occur in the near future. These problems will lead to reductions in primary production, with consequent losses in yields, biodiversity and other multi-functional roles of forests. Local extinctions of highly susceptible plant species may also result.

The ISEFOR project will address these problems through:

- the identification of key groups of potentially invasive alien organisms,
- the development of accurate, state-of-the art diagnostic methods to detect and quantify both known and unknown threats,
- an in depth analysis of the plant nursery trade, the major poorly controlled pathway for distribution of alien pests and pathogens, and
- through the development of modelling software enabling the prediction of geographical areas at risk of attack by alien invasive pests and pathogens under climate change scenarios.

The efficacy of the ISEFOR project will be enhanced through the use of the recently developed large databases of alien pest and pathogen threats, and interfacing with other EU-funded projects dealing with plant health issues. Results will be directed to the national plant protection organisations through targeted workshops.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,973,181.00

PROJECT N°

245268

DURATION

36 months

PROJECT START DATE

September 2010

LIST OF PARTNERS

1. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
2. SVERIGES LANTBRUKSUNIVERSITET (SE)
3. UNIVERSITE DE NEUCHÂTEL (CH)
4. UNIVERSITA DEGLI STUDI DELLA TUSCIA (IT)
5. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
6. INSTYTUT BADAWCZY LESNICTWA (PL)
7. UNIVERSITE LIBRE DE BRUXELLES (BE)
8. ITÄ-SUOMEN YLIOPISTO (FI)
9. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
10. CAB INTERNATIONAL (UK)
11. SAINT-PETERSBURG STATE FOREST ACADEMY (RU)
12. UNIVERSITÄT FUER BODENKULTUR WIEN (AT)
13. EUROPEAN STATE FOREST ASSOCIATION (BE)
14. CONFEDERATION EUROPEENNE DES PROPRIETAIRES FORESTIERS ASBL (LU)
15. PROGRAMME FOR THE ENDORSEMENT OF FOREST CERTIFICATION SCHEMES (CH)
16. CHINESE ACADEMY OF SCIENCE (CN)

FP7-KBBE-2009-3

ISEFOR

Assessing and reducing vulnerability of European forests to climate change and the consequences for industrial and societal needs – SICA (Russia)

www.isefor.com



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(agriculture, forestry); plant health and crop protection

LEGUME-FUTURES



Legume-supported cropping systems for Europe

This research will deliver knowledge and technology for the optimisation of the use of legumes in European agricultural systems and promote the partnerships needed to support the public policy outcomes sought. By integrating the Consortium's extensive set of existing field case studies, modelling and knowledge base, the project will test, validate and deliver novel cropping systems. This network of 18 case studies, in 12 countries, will be the focus of interaction with farmers, SMEs, other businesses, and policy makers. Outputs will include system-optimised cropping plans for each pedo-climatic region, input into existing farm-planning tools, local on-farm demonstrations, a socio-economic analysis that will enable local economic assessment of cropping systems, and an ecological assessment of the effects of relevant farming system changes on greenhouse gas and nitrogen budgets, biodiversity and soil health from the farm to the continental scale. A book on legume-supported eco-efficient farming systems covering all aspects of the use of legumes in Europe will be published. The research is planned around the appreciation of how nitrogen fertilisation and the production and use of plant protein lie at the heart of many of the global, regional and local environmental challenges arising from agriculture. The project will take a novel strategic approach to knowledge interaction and delivery, in order to enhance and pool existing knowledge platforms and databases. It will then deliver the results into the farming community, commercial use, and policy practice beyond the life of the project. The project will facilitate wide access to new and existing knowledge and technologies and it will promote awareness of the role of legumes in the development of sustainable supply chains and consumption patterns. All research results and products will be put in the public domain, and partnership with all the agents of change, including policy makers, will be a key element of the work.

FP7-KBBE-2009-3

LEGUME-FUTURES



Legumes: key multifunctional
legume crops for an energy-efficient
and environmentally friendly future
European agriculture

www.legumefutures.eu



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,981.00

PROJECT N°

245216

DURATION

48 months

PROJECT START DATE

March 2010

LIST OF PARTNERS

1. THE SCOTTISH AGRICULTURAL COLLEGE (UK)
2. HELSINGIN YLIOPISTO (FI)
3. SCOTTISH CROP RESEARCH INSTITUTE (UK)
4. THE PROVOST FELLOWS & SCHOLARS OF THE COLLEGE OF THE HOLY AND UNDIVIDED TRINITY OF QUEEN ELIZABETH NEAR DUBLIN (IE)
5. LEIBNIZ-ZENTRUM FUER AGRARLANDSCHAFTSFORSCHUNG (ZALF) E.V. (DE)
6. DONAL MURPHY-BOKERN (DE)
7. AARHUS UNIVERSITET (DK)
8. AGRICULTURAL UNIVERSITY OF ATHENS (EL)
9. INSTYTUT UPRAWY NAWOZENIA I GLEBOZNAWSTWA, PANSTWOWY INSTYTUT BADAWCZY (PL)
10. CENTRE DE COOPERATION INTERNATIONALE EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
11. MAA JA ELINTARVIKETA LOUDEN TUTKIMUSKESKUS (FI)
12. SVERIGES LANTBRUKSUNIVERSITET (SE)
13. UNIVERSIDAD DE CORDOBA (ES)
14. JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FUER LANDLICHE RAUME, WALD UND FISCHEREI (DE)
15. UNIVERSITA DEGLI STUDI MEDITERRANEA DI REGGIO CALABRIA (IT)
16. INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE AGRICOLA FUNDULEA (RO)
17. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
18. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(agriculture, forestry); plant health and crop protection

LIBERATION



Linking farmland Biodiversity to Ecosystem services for effective ecofunctional intensification

The next few decades will witness a rapidly increasing demand for agricultural products. This growing demand needs to be met largely through intensification (produce more from the same land surface) because there is little scope for an increase in agricultural area. Eco-functional intensification has been proposed as a promising solution. Eco-functional intensification is the optimization of all provisioning, regulating and supporting ecosystem services in the agricultural production process. LIBERATION aims to provide the evidence base for eco-functional intensification and demonstrate the concept in seven representative agricultural landscape types in Europe. Using existing datasets from past and on-going European-scale studies we will first identify general relationships between the configuration of semi-natural habitats, on-farm management and biodiversity in a range of European landscapes and farming systems. Using a modelling approach we will link biodiversity to ecosystem services, by determining relationships between biodiversity, the delivery of multiple ecosystem services and agronomic yield. A novel aspect is that LIBERATION considers above- and below-ground ecosystem services simultaneously and analyses synergies and trade-offs between different ecosystem services. Using this modelling approach we will analyse which on-farm management practices and spatial configuration of semi-natural habitats optimizes yield and which optimizes farm income. We will synthesise management and policy recommendations. We will raise awareness and promote uptake of eco-functional intensification by disseminating project results to the widest possible range of stakeholders, amongst others by means of demonstration projects. This way we hope to liberate the forces of nature to the benefit of agricultural production.

PROJECT COORDINATOR

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(NL)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,997,630.00

PROJECT N°

311781

DURATION

48 months

PROJECT START DATE

February 2013

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN - KNAW (NL)
3. THE UNIVERSITY OF READING (UK)
4. LUNDS UNIVERSITET (SE)
5. SVERIGES LANTBRUKSUNIVERSITET (SE)
6. JULIUS-MAXIMILIANS UNIVERSITAET WUERZBURG (DE)
7. UNIVERSITAET BAYREUTH (DE)
8. MAGYAR TUDOMANYOS AKADEMIA OKOLOGIAI KUTATOKOZPONT (HU)
9. UNIVERSITA DEGLI STUDI DI PADOVA (IT)
10. UNIWERSYTET PRZYRODNICZY W POZNANIU* (PL)
11. FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS FAO (IT)

FP7-KBBE-2012-6-singlestage

LIBERATION



Managing semi-natural habitats and on-farm
biodiversity to optimise ecological services

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(agriculture, forestry); plant health and crop protection

MULTISWARD



Multi species swards and multi scale strategies for multifunctional grassland based ruminant production systems

MULTISWARD will support developments and innovations in grassland production and management throughout the diversity of European farming systems, pedo-climatic and socio-economic conditions. It will enhance regulating and supporting services from grasslands at the farm and landscape levels whilst improving the competitiveness of grassland-based ruminant production systems. This will be achieved by a concerted use of diversity: multi-species swards, diversity of plant communities at the farm and landscape levels and diversity of production systems at the landscape level.

To reach this goal, MULTISWARD will:

1. Define the roles and utility of grassland from economic, agronomic and environmental perspectives and determine stakeholder's requirements and expectations with respect to multi-functionality in EU countries
2. Assess the performance of multi species swards (MSS) in terms of plant productivity and animal nutrition over a range of environments and determine the most appropriate mixtures according to the soil and climatic conditions
3. Optimize the role of MSS in the provision of regulating and supporting services and maintaining a high level of biodiversity
4. Design and evaluate innovations in grazing and animal management (including animal genetics) to enhance the sustainability and competitiveness of grassland-based ruminant production system
5. Provide adequate evaluation tools (indicators and models) to assess ways of combining high production efficiency with optimal provision of regulating and supporting services from grasslands at farm to regional levels
6. Identify and analyse the effects of socio-economic and policy scenarios supporting grassland development or inducing grassland replacement by annual crops in order to support the design of future policies
7. Disseminate knowledge to key stakeholders through a participatory framework that will allow exchanges between researchers and key stakeholders and increase awareness of grassland based systems.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,997,595.00

PROJECT N°

244983

DURATION

48 months

PROJECT START DATE

March 2010

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. ABERYSTWYTH UNIVERSITY (UK)
3. EIDGENÖSSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT (CH)
4. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
5. VLAAMS GEWEST (BE)
6. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
7. GEORG-AUGUST-UNIVERSITÄT GOETTINGEN STIFTUNG OEFFENTLICHEN RECHTS (DE)
8. UNIVERSITETET FOR MILJO OG BIOVITENSKAP (NO)
9. NORWEGIAN INSTITUTE FOR AGRICULTURAL AND ENVIRONMENTAL RESEARCH - BIOFORSK (NO)
10. UNIWERSYTET PRZYRODNICZY W POZNANIU* (PL)
11. RHEA - NATURAL RESOURCES, HUMAN ENVIRONMENT AND AGRONOMY (BE)
12. UNIVERSITÀ DEGLI STUDI DI UDINE (IT)
13. FORSCHUNGSINSTITUT FÜR BIOLOGISCHENLANDBAU STIFTUNG (CH)
14. INSTITUT DE L'ELEVAGE (FR)
15. INRA TRANSFERT S.A. (FR)

FP7-KBBE-2009-3

MULTISWARD

Multifunctional grasslands for sustainable and
competitive ruminant production systems and the
delivery of ecosystem services

www.multisward.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(agriculture, forestry); plant health and crop protection

N-TOOLBOX



Toolbox of cost-effective strategies for on-farm reductions in N losses to water

The aim of this supporting action is to develop a “toolbox” of cost-effective technologies to be implemented at the farm level to protect water from nitrate pollution. The project will bring together four partners with expertise in farm level N management in their regions. The first component of the toolbox will be a catalogue of technologies for reducing N losses on the farm produced using previous research results and local experience. Technologies will be prioritized based on their cost-effectiveness and efficiency at reducing N losses. They will be listed according to region and production-system to enable easy identification of the best management option for specific local conditions. The second toolbox component will be an enhanced decision support tool (NDICEA) which can be used at the farm level to illustrate options for improved N management, and assist farmers in reaching their goals of compliance with the Nitrates Directive. NDICEA was developed by LBI, and will be enhanced using outputs from ongoing and previous projects at partners UAa and UNEW. The toolbox will be implemented on case study farms and the results documented in a “blueprint” for implementing water protection policy at the farm level across the EU. Project results will be widely available via the project website, and through links with the WFD-CIRCA Information Exchange Platform and the Water Information System for Europe (WISE)-RTD webportal. A stakeholder workshop will be conducted at the end of the project to transfer technology to key user groups (farmers, advisors, water protection policy makers). N-TOOLBOX will serve as a centralized resource that can be expanded as new measures and tools are developed. In this way N-TOOLBOX will lay the foundations for improved implementation of water protection policy at the farm level across the EU.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

993,997.00

PROJECT N°

227156

DURATION

43 months

PROJECT START DATE

March 2009

LIST OF PARTNERS

1. UNIVERSITY OF NEWCASTLE UPON TYNE (UK)
2. LOUIS BOLK INSTITUUT (NL)
3. AARHUS UNIVERSITET (DK)
4. UNIVERSIDAD POLITECNICA DE MADRID (ES)

FP7-KBBE-2008-2B

Novel approaches for reducing nitrogen losses

N-TOOLBOX

<http://research.ncl.ac.uk/nefg/ntoolbox>



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

NEWFOREX



New Ways to Value and Market Forest Externalities

Many forest goods and services are not marketed. Methods for assessing these values are incomplete, and so is an understanding of who benefits from them. Forest owners are not rewarded for the value of these externalities and may make decisions providing less externalities than optimal. We can increase welfare, if we develop ways to enhance their provision.

The objectives of NEWFOREX are:

- 1: To provide methods for valuing forest externalities, which handle the jointly produced externalities in an integrated way. Specific attention will be given to the question: Who benefits? This is important as it is among the beneficiaries that likely 'buyers' are to be found.
- 2: To develop a methodology for assessing the cost of provision for externalities. We take into account trans-boundary effects of forest management, and transactions and opportunity costs.
- 3: To assess several market-based methods for enhancing the provision of forest externalities, including e.g. payment schemes provision, certification or (re-)definition of property rights. A method for choice and design of market-based methods will be provided.

Method:

We will test methods and tools and undertake analytical, applied research on a set of empirical surveys among beneficiaries (buyers) and forest owners (providers). These will take place in 5 EU case studies and a developing country case study. They will focus on key externalities: Carbon sequestration, biodiversity protection, watershed services and recreation. The surveys will be designed to allow for comparative analyses and detailed results supporting the achievement of the objectives. Addressing the demand and supply side simultaneously is a unique and innovative stroke.

Results:

New and improved methods, comparative analyses and guidelines of great value will result. We communicate the gains in knowledge using seminars, popular articles, guidelines and best practice examples across Europe. An easy-access Guiding tool is compiled.

FP7-KBBE-2009-3

NEWFOREX

Developing new methods for valuing and marketing currently non-marketable forest functions, goods and services

www.newforex.org



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,712,501.00

PROJECT N°

243950

DURATION

48 months

PROJECT START DATE

December 2009

LIST OF PARTNERS

1. KØBENHAVNS UNIVERSITET (DK)
2. CENTER FOR INTERNATIONAL FORESTRY RESEARCH (ID)
3. CENTRE TECNOLÒGIC FORESTAL DE CATALUNYA (ES)
4. EUROPEAN FOREST INSTITUTE (FI)
5. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
6. METSANTUTKIMUSLAITOS (FI)
7. UNIVERSITÄT HAMBURG (DE)
8. UNIVERSITÀ DEGLI STUDI DI PADOVA (IT)
9. UNIWERSYTET WARSZAWSKI (PL)
10. EUROPEAN STATE FOREST ASSOCIATION (BE)
11. CONFEDERATION EUROPEENNE DES PROPRIÉTAIRES FORESTIERS ASBL (LU)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

NOVELTREE



Novel tree breeding strategies

The challenges facing forest geneticists and tree breeders include recognition of changing demands on forests for a wider range of high value forest products and sustainability of forest ecosystems under climate change.

NOVELTREE is designed to enable significant genetic improvement of tree characteristics and forest products properties to satisfy the needs (quality, quantity, sustainability, vulnerability) of the forest-based sector and consumers.

NOVELTREE will:

- i) Provide a list of morphological and physiological traits relevant as selection criteria for pest tolerance, sustainable biomass production, wood properties for present and future use and plastic response to climate change
- ii) Identify functional allelic polymorphisms for a suite of traits of interest in a post-genomics approach to improve selection efficiency and monitor genetic variation along the selection process
- iii) Develop high throughput phenotyping and genotyping tools. These new tools will allow earlier genetic evaluation, higher selection intensity, increased accuracy in genetic prediction and better monitoring of genetic diversity along generations
- iv) Develop novel/improved breeding strategies and demonstrate their efficiency in case studies. Demonstration will focus on model tree species of high economic importance in different European regions: Maritime Pine, Scots Pine, Spruce, and Poplar
- v) Assess the financial and environmental impacts of genetically improved trees at stand and landscape levels thanks to a multidisciplinary approach and simulation tools
- vi) Provide tree breeders and forest owners with support decision tools for optimal deployment of improved genetic stocks in both prevailing and future climate, and under risk of pest and disease attacks
- vii) Provide training in emerging technologies in connection with on-going European projects, disseminate the results to different publics and transfer technology to the forest-based sector.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

4,150,000.00

PROJECT N°

211868

DURATION

54 months

PROJECT START DATE

May 2008

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. STIFTELSEN SKOGSBRUKETS FORSKNINGSGENOMINSTITUT - SKOGFORSK (SE)
3. METSANTUTKIMUSLAITOS (FI)
4. UPPSALA UNIVERSITET (SE)
5. FORESTRY COMMISSION RESEARCH AGENCY (UK)
6. OULUN YLIOPISTO (FI)
7. UNIVERSITÀ DEGLI STUDI DI UDINE (IT)
8. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
9. THE UNIVERSITY OF EDINBURGH (UK)
10. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
11. VIB (BE)
12. UNIVERSITA DEGLI STUDI DELLA TUSCIA (IT)
13. INRA TRANSFERT S.A. (FR)
14. UNIVERSITEIT GENT (BE)
15. VLAAMS GEWEST (BE)

FP7-KBBE-2007-1

Novel forest tree breeding

NOVELTREE

www.noveltree.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

NUE-CROPS



Improving nutrient efficiency in major European food, feed and biofuel crops to reduce the negative environmental impact of crop production

The MAIN AIM of the proposed integrating project NUE-CROPS is to develop knowledge, models and tools required to (a) breed/select NUTRIENT USE EFFICIENT (NUE) CROPS and (b) integrate NUE-crops with AGRONOMIC INNOVATIONS to significantly reduce fertiliser use and associated negative environmental impacts of crop production, while maintaining or improving crop yield and quality. The consortium includes 10 academic centres of excellence and 3 large breeding companies in 6 EU member states, China (an ICPC region) and the USA.

The strategic CONCEPTS/OBJECTIVES of NUE-CROPS are to support the:

1. DEVELOPMENT OF NUE-VARIETIES of 4 MAJOR EUROPEAN CROPS (wheat, oilseed rape, potato, maize) for different MACROCLIMATIC REGIONS. This will be based on (a) classical QTL identification methods, (b) association genetics approaches, (c) gene expression profiling (and where appropriate proteomic, metabolomic analyses and/or analytical transformation analyses) and (d) whole plant physiological studies. R&D activities will focus on the 4 major crops species, but deliverables from studies with model plants/crops (*Arabidopsis*, *Brassica rapa*, barley) will be used as “genetic bridges” for the genetically complex crops wheat and oilseed rape.
2. INTEGRATION of NUE-CROPS with INNOVATIVE MANAGEMENT approaches (e.g. improved fertilisation regimes, rotational designs, winter cover crop use and, tillage systems). This will be based on: (a) field experiments to evaluate the impact of NUE crops under contrasting agronomic scenarios and (b) the construction/validation of models/algorithms for nutrient budgeting/precision farming systems
3. To ESTABLISH an EFFICIENT TRAINING and DISSEMINATION programme aimed at rapid exploitation and application of project deliverables in commercial crop production.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,998.00

PROJECT N°

222645-2

DURATION

60 months

PROJECT START DATE

May 2009

LIST OF PARTNERS

1. UNIVERSITY OF NEWCASTLE UPON TYNE (UK)
2. WAGENINGEN UNIVERSITEIT (NL)
3. GEORG-AUGUST-UNIVERSITAET GOETTINGEN STIFTUNG OEFFENTLICHEN RECHTS (DE)
4. AGROBIOINSTITUTE (BG)
5. AARHUS UNIVERSITET (DK)
6. FORSCHUNGSINSTITUT FUR BIOLOGISCHENLANDBAU STIFTUNG (CH)
7. SCOTTISH CROP RESEARCH INSTITUTE (UK)
8. HEINRICH-HEINE-UNIVERSITAET DUESSELDORF (DE)
9. INSTITUTE OF AGRICULTURAL RESOURCES AND REGIONAL PLANNING CAAS (CN)
10. WASHINGTON STATE UNIVERSITY (US)
11. KWS SAAT AG (DE)
12. KWS UK (UK)
13. KWEEK- EN RESEARCHBEDRIJF AGRICO B.V. (NL)
14. SABANCI UNIVERSITY (TR)
15. KØBENHAVNS UNIVERSITET (DK)

FP7-KBBE-2007-2A

NUE-CROPS



Reducing the utilisation of mineral fertilisers by improving the efficiency of nutrient use in European crops

<http://research.ncl.ac.uk/nefg/nuecrops>



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

OSCAR



Optimising Subsidiary Crop Applications in Rotations

There is a need to improve sustainability in farming systems particularly through soil care and improvement, but not at the expense of productivity. One approach is to focus on a comprehensive advance in conservation tillage. This will be developed from improved ways of integrating subsidiary crops (SC) as living or dead mulches or cover crops with the main crops in rotations so as to simultaneously improve crop nutrition, health, and productivity. The SC will deliver multiple ecological services by increasing the duration of soil cover in the rotation overall while increasing species diversity, minimising the use of tillage and agrochemicals, enhancing biological N fixation and soil C content, and both reducing water demand in dry climates and improving soil workability in wetter climates.

The research will draw on a wide range of previous and ongoing EU and related projects and will be based on 11 coordinated field experiments in different climatic regions together with three long-term experiments in Europe and Brazil. These experiments will all be assessed for economic and ecological impact including the often neglected issue of legume root health. Breeding companies and manufacturers of agricultural equipment from all regions of interest will be involved in finding adapted solutions for the different environments by extending the range of potentially useful plant species and by developing appropriate machinery to promote adoption in practical agriculture. The potential for useful chemical extraction from the existing and novel SCs will also be investigated.

A central deliverable will be a database supported 'Cover Crop and Living Mulch Toolbox' and Decision Support Tool which will encourage multilingual stakeholder exchange and dissemination during and beyond the lifetime of the project so as to capture farmer experience. The results of the project as a whole will be of use for and improve sustainability in low-input, organic, and conventional farming systems.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,998,654.00

PROJECT N°

289277

DURATION

48 months

PROJECT START DATE

April 2012

LIST OF PARTNERS

1. UNIVERSITAET KASSEL (DE)
2. Eidgenössisches Volkswirtschaftsdepartement (CH)
3. NORWEGIAN INSTITUTE FOR AGRICULTURAL AND ENVIRONMENTAL RESEARCH - BIOFORSK (NO)
4. INSTITUTO AGRONOMO DO PARANA (BR)
5. INTERNATIONAL CENTRE FOR AGRICULTURAL RESEARCH IN THE DRY AREAS (SY)
6. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (MA)
7. INSTYTUT UPRAWY NAWOZENIA I GLEBOZNAWSTWA, PANSTWOWY INSTYTUT BADAWCZY (PL)
8. PROGRESSIVE FARMING TRUST LTD T/A THE ORGANIC RESEARCH CENTRE (UK)
9. SVERIGES LANTBRUKSUNIVERSITET (SE)
10. SCUOLA SUPERIORE DI STUDI UNIVERSITARI E DI PERFEZIONAMENTO SANT'ANNA (IT)
11. TECHNISCHE UNIVERSITAET MUENCHEN (DE)
12. KØBENHAVNS UNIVERSITET (DK)
13. UNIVERSITA DI PISA (IT)
14. UNIVERSITA DEGLI STUDI DELLA TUSCIA (IT)
15. WAGENINGEN UNIVERSITEIT (NL)
16. ARCOIRIS SRL (IT)
17. FERRARI COSTRUZIONI MECCANICHE SRL (IT)
18. MARANGON SRL (IT)
19. P.H. PETERSEN SAATZUCHT LUNDSGAARDGMBH & CO KG (DE)
20. FRIEDRICH WENZ GMBH (DE)

FP7-KBBE-2011-5

OSCAR

Development of cover crop and mulch systems for sustainable crop production

<http://sitem.herts.ac.uk/aeru/oscar>



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

PALM PROTECT



Strategies for the eradication and containment of the invasive pests *Rhynchophorus ferrugineus* Olivier and *Paysandisia archon* Burmeister

The PALM PROTECT consortium aims to develop reliable methods, for use by national plant protection organisations (NPPO), inspection services, growers and other end-users, for early detection, eradication, control and containment of the red palm weevil, *Rhynchophorus ferrugineus* and the moth *Paysandisia archon*. The methods will be developed for use at origin, point of entry, in transit and on-site to combat these invasive pests of palm trees. The methods will support stakeholders and end-users in the implementation of Council Directives 2000/29/EC, 2007/365/EC, 2008/776/EC, 2009/7/EC and 2010/467/EU.

The objectives identified to achieve these goals are: 1) to provide a more comprehensive understanding of the biology (life cycles, host range, capacity for dispersal, behaviour) of *R. ferrugineus* and *P. archon* to facilitate decision making for risk assessment and optimisation of monitoring and control methods. 2) To combat the spread and establishment of *R. ferrugineus* and *P. archon* by the development of technologies for the early detection and monitoring of these pests. Detection in quarantine areas using dogs, acoustic and thermal methods, and in open areas using trapping and aerial/satellite imaging, along with a decision support system 3) To develop methods to eradicate, control and contain *R. ferrugineus* and *P. archon*, to restrict their further invasion of EU territories. Scientifically based protocols will be developed for quarantine treatments, for eradication and containment including preventive and curative techniques, and proper disposal of infested material. 4) To disseminate the findings of this work both within and outside the EU Community, through working with NPPOs, the European Plant Protection Organisation (EPPO) and other stakeholders.

PALM PROTECT will address gaps in current technology for the detection, eradication and containment of *R. ferrugineus* and *P. archon*, thereby helping to minimise the economic and environmental impact of these pests.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,419.00

PROJECT N°

289566

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
2. THE AGRICULTURAL RESEARCH ORGANISATION OF ISRAEL - THE VOLCANI CENTRE (IL)
3. UNIVERSITAT JAUME I DE CASTELLON (ES)
4. UNIVERSIDAD DE CORDOBA (ES)
5. UNIVERSIDAD POLITECNICA DE VALENCIA (ES)
6. BENAKI PHYTOPATHOLOGICAL INSTITUTE (EL)
7. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
8. UNIVERSITA DEGLI STUDI DI PALERMO (IT)
9. UNIVERSITA POLITECNICA DELLE MARCHE (IT)
10. ENDOTERAPIA VEGETAL SL (ES)
11. CENTRE DE COOPERATION INTERNATIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
12. UNIVERZA V LJUBLJANI (SI)
13. THE AGRICULTURAL RESEARCH CENTER (EG)

Eradication and containment strategies and tools for the implementation of EU legislation against the red palm weevil *Rhynchophorus ferrugineus* Olivier and *Paysandisia archon* Burmeister

www.palmprotect.eu

FP7-KBBE-2011-5

PALM PROTECT



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(agriculture, forestry); plant health and crop protection

PRATIQUE



Enhancements of Pest Risk Analysis Techniques

PRATIQUE (Enhancements of Pest Risk Analysis Techniques) will carry out all the key work listed in the call and address the major challenges for pest risk analysis (PRA) in Europe. This will be achieved through three principal objectives: to assemble the datasets required to construct effective PRAs valid for the whole of the EU, to conduct multi-disciplinary research that enhances the techniques used in PRA and to ensure that the PRA decision support scheme meets its purpose, is efficient and user-friendly.

Pest risk analysts, phytosanitary experts, invasive alien species specialists, ecologists, economists and risk modellers from 13 leading institutes in the EU, one from Australia and one from New Zealand will produce the first structured inventory of PRA datasets for the EU and undertake targeted research to improve existing procedures and develop new methods for

- the assessment of economic, environmental and social impacts,
- summarising risk in effective, harmonised ways that take account of uncertainty,
- mapping endangered areas
- pathway risk analysis and systems approaches and
- guiding actions during emergencies caused by outbreaks of harmful pests.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,764,317.00

PROJECT N°

212459

DURATION

39 months

PROJECT START DATE

March 2008

LIST OF PARTNERS

1. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
2. PLANT PROTECTION INSTITUTE (BG)
3. BOTANICKÝ ÚSTAV AVCR, V.V.I. (CZ)
4. EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANISATION (FR)
5. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
6. CENTRE DE COOPERATION INTERNATIONALE EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
7. JULIUS KÜHN INSTITUT BUNDESFORSCHUNGSINSTITUT FÜR KULTURPFLANZEN (DE)
8. UNIVERSITÀ DEGLI STUDI DI PADOVA (IT)
9. WAGENINGEN UNIVERSITEIT (NL)
10. UNIVERSITE DE FRIBOURG (CH)
11. CAB INTERNATIONAL (UK)
12. IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE (UK)
13. COOPERATIVE RESEARCH CENTRE FOR NATIONAL PLANT BIOSECURITY (AU)
14. LINCOLN UNIVERSITY (NZ)
15. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

FP7-KBBE-2007-1

PRATIQUE

Development of more efficient risk analysis techniques for pests and pathogens of phytosanitary concern

<https://secure.fera.defra.gov.uk/pratique/>



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

PURE

Pesticide Use-and-risk Reduction in European farming systems with Integrated Pest Management

To meet both the worldwide demand for food security and new environmental needs, agriculture is must increase food production and quality while decreasing its ecological footprint. Ensuring sustainability and competitiveness with reduced pesticide inputs is a major challenge.

PURE will provide integrated pest management (IPM) solutions and a practical toolbox for their implementation in key European farming systems (annual arable and vegetable, perennial, and protected crops) in which reduction of pesticide use and better control of pests will have major effects. PURE will exploit recent advances in emerging technologies, plant-pest-enemies interactions, soil and landscape ecology and pest evolution to feed IPM solutions with innovative diagnostic and decision support systems, physical devices and bio-products, strategies for ecological pest regulation and improved durability of control methods.

For each selected farming system, PURE will combine existing methods with new tools and technologies into novel IPM solutions addressing the biological, agronomical and economical diversity in Europe. IPM solutions will range from easy to adopt combinations of tactical control methods to more ambitious solutions involving strategic changes at farm level. PURE will test the efficacy, practicability and relevance of IPM solutions under the agro-ecosystems and farming conditions of the main broad European regions by on-station and on-farm experiments and will perform a comparative assessment of their environmental, economic and social sustainability. By jointly involving researchers and the key actors of pest management (farmers, advisors, policy makers and actors of the food supply chain) in design and assessment, PURE will facilitate the adoption of these innovative IPM solutions.

PURE will thereby contribute to reduce the risks to human health and the environment and the dependence on pesticides and will facilitate the implementation of the pesticides package legislation.

FP7-KBBE-2010-4

PURE



Integrated pest management in farming systems of major importance for Europe

www.pure-ipm.eu



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

8,999,828.00

PROJECT N°

265865

DURATION

48 months

PROJECT START DATE

March 2011

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. ROTHAMSTED RESEARCH LIMITED (UK)
3. AARHUS UNIVERSITET (DK)
4. JULIUS KUHN INSTITUT BUNDESFORSCHUNGSINSTITUT FUR KULTURPFLANZEN (DE)
5. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
6. WAGENINGEN UNIVERSITEIT (NL)
7. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
8. KMETIJSKI INSTITUT SLOVENIJE - AGRICULTURAL INSTITUTE OF SLOVENIA (SI)
9. THE JAMES HUTTON INSTITUTE (UK)
10. FONDAZIONE EDMUND MACH (IT)
11. INSTITUTO VALENCIANO DE INVESTIGACIONES AGRARIAS (ES)
12. INSTYTUT OCHRONY ROSLIN - PANSTOWOWY INSTYTUT BADAWCZY (PL)
13. DEBRECENI EGYETEM (HU)
14. JRC - JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
15. VIDENCENTRET FOR LANDBRUG (DK)
16. ASSOCIATION DE COORDINATION TECHNIQUE AGRICOLE (FR)
17. BAYER CROPSCIENCE AG (DE)
18. BIOTOP SAS (FR)
19. NATURAL PLANT PROTECTION SAS (FR)
20. BURKARD MANUFACTURING COMPANY LIMITED (UK)
21. BLGG AGROXPERTUS B.V. (NL)
22. INRA TRANSFERT S.A. (FR)
23. THE UNIVERSITY OF SHEFFIELD (UK)
24. INVIVO AGROSOLUTIONS SAS (FR)
25. SCOTTISH CROP RESEARCH INSTITUTE (UK)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

QUESSA



Quantification of ecological services for sustainable agriculture

The project aims to identify the key semi-natural habitats (SNH), outside and within crops, providing essential ecological services (ES). Vegetation traits will be linked to potential ES provision, case studies will measure actual ES levels and inform models which will show unused opportunities and trade-offs among ES by SNH from habitat to landscape scale. This will be achieved for a range of representative cropping systems and farming intensities in regions dominated by agriculture and matched to the requirements of local and national stakeholders. Surveys will identify key SNH and existing literature will be used to link their vegetation traits to ES provision. ES provision will be measured in existing habitat types (SNH to crop) across economically important cropping systems, farming intensities and four European agro-climatic zones using simple techniques in 16 case studies. A case study is defined by a unique combination of region, crop species, and service. Each case study will concentrate on locally important cropping system and the main ES required. Pollination and pest control have been identified as main ES needed, but also soil fertility, weed control and social services will be considered. The relative socio-economic weight of the studied ecosystem services will be appraised using feedback from national experts using a semi-quantitative method. Data will parameterise spatially explicit models to determine how the vegetation composition, management, shape, area, and placement of SNH in agricultural landscapes affect the distribution of mobile-agent based ecosystem services from farm to landscape level. To investigate synergies and trade-offs in ecological services, multi-criteria analysis will be developed to combine a suite of modules in an integrative modelling framework. Outputs are designed to inform local, national and EU stakeholders on how to improve ES provision from SNH and will include a novel web-based tool.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,998,619.00

PROJECT N°

311879

DURATION

48 months

PROJECT START DATE

February 2013

LIST OF PARTNERS

1. GAME & WILDLIFE CONSERVATION TRUST (UK)
2. EIDGENÖSSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT (CH)
3. WAGENINGEN UNIVERSITEIT (NL)
4. SCUOLA SUPERIORE DI STUDI UNIVERSITARI E DI PERFEZIONAMENTO SANT'ANNA (IT)
5. SZENT ISTVAN EGYETEM (HU)
6. BORDEAUX SCIENCES AGRO (FR)
7. JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
8. THE UNIVERSITY OF EXETER (UK)
9. SOLAGRO ASSOCIATION (FR)
10. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
11. EESTI MAAILIKOOL (EE)
12. UNIVERSITA DI PISA (IT)
13. UNIVERSITAET KOBLENZ-LANDAU (DE)
14. ESSRG KFT. (HU)

FP7-KBBE-2012-6-singlestage

QUESSA



Managing semi-natural habitats and on-farm biodiversity to optimise ecological services

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

REDNEX



Innovative and practical management approaches to reduce nitrogen excretion by ruminants

Dairying is an important sector of EU agriculture, but intensification has been accompanied by an increase in N surplus. This has a negative environmental impact on groundwater (pollution with nitrates), surface water (eutrophication) and on the atmosphere (de-nitrification and ammonia volatilisation). The EU seeks to stimulate measures that improve management of nutrients, waste and water as a start to move to management practices beyond “usual good-farming practice”. The objective of REDNEX is to develop innovative and practical management approaches for dairy cows that reduce nitrogen excretion into the environment through the optimization of rumen function, an improved understanding and prediction of dietary nitrogen utilization for milk production and excretion in urine and faeces. Novel tools for monitoring these processes and predicting the consequences in terms of N losses on-farm will be developed. At the centre of the project is a detailed mathematical model of N utilization by the cow which will act to integrate results from previous work and from new research carried out in the project. This interlinked research aims to improve the supply of amino acids to be absorbed relative to the quantity and quality of amino acids and carbohydrates in feed allowing a reduction in N intake. Research to understand amino acid absorption, intermediary utilization and the processes involved in the transfer of urea N from blood to the gastro-intestinal tract will further underpin model development and indicate strategies to reduce N losses. To predict N losses on-farm and the impact on profitability, a harmonised applied model will be derived from the mechanistic model and will be supported by tools to better describe feeds and biomarkers to indicate N status. Impact of the research will be enabled by dissemination and knowledge interaction using a participatory approach to include the views of stakeholders and recognition of the need to provide support to EU neighbours.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,550,000.00

PROJECT N°

211606

DURATION

60 months

PROJECT START DATE

July 2008

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
3. AARHUS UNIVERSITET (DK)
4. THE UNIVERSITY OF READING (UK)
5. ABERYSTWYTH UNIVERSITY (UK)
6. WAGENINGEN UNIVERSITEIT (NL)
7. UNIVERSITEIT GENT (BE)
8. UNIVERSITAT AUTONOMA DE BARCELONA (ES)
9. SLOVENSKE CENTRUM POLNHOŠPODARŠKEHO VYSKUMU (SK)
10. FRIEDRICH LOEFFLER INSTITUT - BUNDESFORSCHUNGSINSTITUT FUER TIERGESUNDHEIT (DE)
11. EUROPEAN ASSOCIATION FOR ANIMAL PRODUCTION (IT)

FP7-KBBE-2007-1

Reduction of N excretion in ruminants

REDNEX

www.rednex-fp7.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

REFERTIL



Improvement of comprehensive bio-waste transformation and nutrient recovery treatment processes for production of combined natural products

The objective driven goal of this SME targeted proposal is to improve the currently used compost and biochar treatment systems, towards advanced, efficient and comprehensive bio-waste treatment and nutrient recovery process with zero emission performance. The improved output products are safe, economical, ecological and standardized compost and bio-char combined natural fertilizers and soil amendment agricultural products used by farmers. The added value and energy efficient transformation of urban organic waste, farm organic residues and food industrial by-product streams made by improved carbonization, biotechnological formulation and upgraded composting technologies, with particular attention to the recovery of nutrients, such as phosphorous and nitrogen. The targeted high quality output products aiming to reduce mineral fertilizers and intensive chemicals use in agriculture; enhancing the environmental, ecological and economical sustainability of food crop production; reducing the negative footprint of the cities and overall contributing to climate change mitigation. In this context the improved bio-waste treatment process opens new technical, economical, environmental and social improvement opportunities, while improving the use, effectiveness and safety of the resulting compost and bio-char products in agriculture. The output products developed in a standardized way to meet all industrial, agricultural and environmental norms and stands in European dimension. Proactive and coherently integrated cooperation made between multi level stakeholder in Europe, with result oriented potential benefit to SMEs and farmers for more efficient utilization of the final products by the end-users. The proposal providing strong support for policy makers for the revision of relevant policies, while setting up future common bio-waste recycling targets, common quality standard requirements for bio-waste treatment, compost and bio-char quality and trading requirements.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,992,935.00

PROJECT N°

289785

DURATION

48 months

PROJECT START DATE

October 2011

LIST OF PARTNERS

1. TERRA HUMANA CLEAN TECHNOLOGY DEVELOPMENT, ENGINEERING AND MANUFACTURING LTD HU (HU)
2. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
3. AARHUS UNIVERSITET (DK)
4. VIDENCENTRET FOR LANDBRUG (DK)
5. UNIVERSITA DEGLI STUDI DI TORINO (IT)
6. GOTTFRIED WILHELM LEIBNIZ UNIVERSITAET HANNOVER (DE)
7. BIOMASA DEL GUADALQUIVIR SA (ES)
8. TWI LIMITED (UK)
9. WESSLING HUNGARY KFT (HU)
10. REGIONALNA WIELKOPOLSKA IZBA ROLNO-PRZEMYSLOWA (PL)
11. KOTO PROIZVODNO IN TRGOVSKO PODJETJE DOO (SI)
12. COMUNE DI GRUGLIASCO (IT)
13. RENETECH BIORESOURCES LIMITED (IE)
14. PROFIKOMP KORNYEZETTECHNIKA KORNYEZETVEDELMI, KERESKEDELMI ES SZOLGALTATO ZARTKORUEN MUKODO RT (HU)

FP7-KBBE-2011-5

REFERTIL

Reducing mineral fertilisers and chemicals use in agriculture by recycling treated organic waste as compost and bio-char products

www.refertil.info



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

ROOTOPOWER



Empowering root-targeted strategies to minimize abiotic stress impacts on horticultural crops

ROOTOPOWER aims to develop a multidisciplinary suite of new tools targeted to the root system to enhance agronomic stability and sustainability of dicotyledonous crops under multiple and combined abiotic stresses: salinity, water stress, soil compaction and low fertilizer (N, P, K) input. Central to our approach is the use of tomato as a model species since it can be very easily grafted (usual commercial practise). This surgical technique allows precise assessment of the effect of altering root traits on crop performance independently of any shoot traits, since the scion (shoot) is constant. This project will analyze and exploit the natural genetic variability existing in a recombinant inbred line population (RIL) from a cross between *Solanum lycopersicum* and *S. pimpinellifolium* and other selected mutants and functional lines (used as rootstocks) for their performance under multiple abiotic stresses and for their biotic interaction with natural soil microorganisms (mycorrhiza and rhizobacteria). The key research challenges are: (i) to identify stress-resistant root systems and rhizosphere microorganisms (and their synergisms) for enhanced resistance to individual and combined abiotic stresses; and (ii) to understanding the underlying genetic and physiological mechanisms, which are potentially fundamental to all crops, and readily exploited in dicotyledonous crops. This project will first identify genetic variation and quantitative trait loci (QTL) that allow tomato roots to confer crop resistance to a range of abiotic stresses, alone or in association with arbuscular mycorrhizal fungi (AMF) and/or plant growth promoting rhizobacteria (PGPR). This approach will establish the physiological and signalling processes conferred by key QTLs, and identify candidates for the causative genes by obtaining near isogenic lines (NILs) for selected QTLs. The validity of the knowledge generated will be confirmed in tomato and other species within the timeframe of the project.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,997,449.00

PROJECT N°

289365

DURATION

48 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
2. UNIVERSITE CATHOLIQUE DE LOUVAIN (BE)
3. THE UNIVERSITY OF WARWICK (UK)
4. LANCASTER UNIVERSITY (UK)
5. INSTITUTO VALENCIANO DE INVESTIGACIONES AGRARIAS (ES)
6. UNIVERSITY OF CUKUROVA (TR)
7. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
8. SAT N 9895 AGRICOLA PERICHAN SCP (ES)
9. UNIGENIA BIOSCIENCE SLU (ES)
10. AGROCARE NIEUWE DWARSWEG 1 BV (NL)
11. INOQ GMBH (DE)
12. UNIVERSIDAD MIGUEL HERNANDEZ DE ELCHE (ES)
13. CRANFIELD UNIVERSITY (UK)

FP7-KBBE-2011-5

ROOTOPOWER

Root signalling, growth and development under abiotic stress conditions

www.rootopower.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

SIRRIMED



Sustainable use of irrigation water in the mediterranean region

SIRRIMED project will address issues related to sustainable use of water in Mediterranean irrigated agricultural systems, with the overall aim of optimizing irrigation water use. The approach proposed in SIRRIMED for reaching this goal will be based in an Integrated Water Irrigation Management (IWIM) where the improving water use efficiency will be considered at farm, irrigation district and watershed scales. This strategy implies the innovation of more efficient irrigation techniques improving water productivity that permit savings in water consumption. SIRRIMED will consider the development, test and validation of new deficit irrigation strategies, the sustainable use of poor quality waters and the improvement of precise irrigation scheduling using plant sensors. These new techniques will be integrated with suitable husbandry irrigation practices. At the district scale, efforts should be directed towards an integrated policy of water allocation which accounts for the characteristics and specificity of each farm, requiring the availability of data bases and management tools (decision support systems) specifically designed to fulfil the objectives of maximizing water use efficiency. At the watershed scale, priority should be devoted to the assessment of new models of water governance, and the definition of strategies and policies aimed at promoting a more responsible use of irrigation water. Finally, SIRRIMED will establish a sound dissemination strategy for transfer of knowledge towards the end users, with a very important participatory approach to facilitate an adequate involvement of stakeholders (farmers, association of irrigation users, water authorities and SMEs).

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,078.00

PROJECT N°

245159

DURATION

42 months

PROJECT START DATE

July 2010

LIST OF PARTNERS

1. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
2. UNIVERSIDAD POLITECNICA DE CARTAGENA (ES)
3. CONSORZIO DI BONIFICA DI SECONDO GRADO PER IL CANALE EMILIANO ROMAGNOLO (IT)
4. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
5. LANCASTER UNIVERSITY (UK)
6. KENTRO EREVNAS TECHNOLOGIAS KAI ANAPTYXIS THESSALIAS (EL)
7. UNIVERSIDAD DE CORDOBA (ES)
8. ASOCIACION DE FABRICANTES DE RIEGO ESPANOLAS (ES)
9. EUROMEDITERRANEAN IRRIGATORS COMMUNITY (ES)
10. VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS, WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG (NL)
11. LITANI RIVER AUTHORITY (LB)
12. DEBBANE FRERES SAL (LB)
13. INSTITUT AGRONOMIQUE ET VETERINAIRE HASSAN II (MA)
14. SOCIETE ARABE POUR LES INVESTISSEMENTS AGRICOLES SAPIAMA SARL (MA)
15. NATIONAL RESEARCH CENTER (EG)

FP7-KBBE-2009-3

SIRRIMED

Irrigation water saving solutions for Mediterranean agriculture – SICA (Mediterranean Partner Countries)

www.sirrimed.org



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(agriculture, forestry); plant health and crop protection

SMARTSOIL



Sustainable farm Management Aimed at Reducing Threats to SOILs under climate change

Farming practices that lead to declining returns and inputs of carbon (C) to soils pose a threat to soil functions by reducing availability of organic matter for soil microbes and by affecting soil structure, and soil C stocks that are key to regulating greenhouse gas emissions. SmartSOIL focuses on arable and mixed farming systems in Europe and will develop an innovative approach using the soil C flow and stocks concept to assess the impact of C management on crop productivity, soil organic C (SOC) stocks and other ecosystem services. SmartSOIL will identify and develop options to increase C stocks and optimise C use (flows) whilst maintaining sustainable SOC stocks. The flow and stocks concept will delineate short- versus long-term management effects on vital soil functions through meta-analyses of data from European long-term experiments (LTEs), as well as new measurements within LTEs. The new understanding will be used to improve existing soil and crop simulation models and test the models against independent LTE data. The models will then be used to derive a simplified model to estimate the short- and long-term effects of management on crop productivity and SOC storage. Scenarios of future management systems in Europe for improved productivity and enhanced SOC sequestration will be evaluated under current and future climate. The cost-effectiveness of alternative policy measures and options for managing SOC flows and stocks for improved productivity and SOC storage will be assessed based on the simplified model. SmartSOIL will develop a decision support tool (DST) to enable farmers, advisors and policy makers to discuss and select the most appropriate and cost-effective practices for particular farming systems, soils and climates. SmartSOIL will engage key stakeholders in case study regions and the wider EU in the development of the DST, guidelines and policy recommendations, and will inform the scientific and user community on progress and results.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,989,480.00

PROJECT N°

289694

DURATION

48 months

PROJECT START DATE

November 2011

LIST OF PARTNERS

1. AARHUS UNIVERSITET (DK)
2. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
3. KØBENHAVNS UNIVERSITET (DK)
4. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
5. UNIVERSITA DEGLI STUDI DI FIRENZE (IT)
6. ECOLOGIC INSTITUT GEMEINNÜTZIGE GMBH (DE)
7. UNIVERSIDAD POLITÉCNICA DE MADRID (ES)
8. THE SCOTTISH AGRICULTURAL COLLEGE (UK)
9. UNIVERSITY OF GLOUCESTERSHIRE (UK)
10. SZKOLA GŁÓWNA GOSPODARSTWA WIEJSKIEGO (PL)
11. LE GROUPE-CONSEIL BAASTEL SPRL (BE)
12. AGRARGAZDASAGI KUTATO INTEZET (HU)

FP7-KBBE-2011-5

SMARTSOIL

Sustainable management of agricultural soils in Europe for enhancing food and feed production and contributing to climate change mitigation

<http://smartsoil.eu/>



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

SOLIBAM



Strategies for Organic and Low-input Integrated Breeding And Management

The objective of SOLIBAM is to develop novel breeding approaches integrated with management practices to improve the performance, quality, sustainability and stability of crops adapted to organic and lowinput systems in Europe and Sub-Saharan Africa. The underlying hypothesis is that diverse populations in diverse organic and low-input systems are more resilient to stress and can therefore better adapt to environmental variation.

SOLIBAM increases within crop diversity in organic and low input systems. Field trials across environments evaluate the behaviour of crops that contain different levels of diversity. New populations and varieties are developed through innovative methods, e.g. co-breeding within organic systems. However, diversity in crops is in conflict with current seed laws. SOLIBAM will address this issue in Europe and Africa and will also advance the development of new regulations for protection of varieties, which balance Plant Breeders and Farmers' Rights. SOLIBAM develops participatory plant breeding and management strategies specific to marginal areas or small scale agriculture in Europe and Africa. All the relevant stakeholders, including end-users and consumers, are involved in the improvement of varieties for organic and low input agriculture.

SOLIBAM designs, develops and tests innovative arable and vegetable cropping systems based on high levels of agrobiodiversity. These will be fully integrated to optimise organic and low input farming systems, enabling the impact of breeding and agronomic innovations on the surrounding environment as well as on the crop nutritional, organoleptic and end-use quality to be quantified. A series of cereal (durum and soft wheat, barley, maize), legume (beans, niebé and faba beans) and vegetable crops (bean, tomato, broccoli and cabbage) are tested in different agroecological conditions in Europe and Africa to provide models for various climates and breeding approaches. The sustainability of SOLIBAM strategies are tested in different case studies across countries and recommendations for future approaches will be proposed.

FP7-KBBE-2009-3

SOLIBAM



Improving performance and quality of crops in the context of organic and low-input systems by breeding and management

www.solibam.eu



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,000.00

PROJECT N°

245058

DURATION

54 months

PROJECT START DATE

March 2010

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. ASSOCIAZIONE ITALIANA PER L AGRICOLTURA BIOLOGICA*AIAB (IT)
3. PROGRESSIVE FARMING TRUST LTD T/A THE ORGANIC RESEARCH CENTRE (UK)
4. DANMARKS TEKNISKE UNIVERSITET (DK)
5. INSTITUT TECHNIQUE DE L'AGRICULTURE BIOLOGIQUE (FR)
6. TECHNISCHE UNIVERSITAET MUENCHEN (DE)
7. INSTITUTO DE TECNOLOGIA QUIMICA E BIOLOGICA - UNIVERSIDADE NOVA DE LISBOA (PT)
8. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
9. ESCOLA SUPERIOR AGRARIA DE COIMBRA (PT)
10. CENTRE FOR AGRICULTURAL RE SEARCH, HUNGARIAN ACADEMY OF SCIENCES (HU)
11. SCUOLA SUPERIORE DI STUDI UNIVERSITARI E DI PERFEZIONAMENTO SANT'ANNA (IT)
12. UNIVERSITA DEGLI STUDI DI PERUGIA (IT)
13. EIDGENOESSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT (CH)
14. KØBENHAVNS UNIVERSITET (DK)
15. INRA TRANSFERT S.A. (FR)
16. SAATZUCHT DONAU GESMBH & CO KG (AT)
17. GAUTIER SEMENCES SAS (FR)
18. AGROVEGETAL S.A. (ES)
19. ARCOIRIS SRL (IT)
20. INTERNATIONAL CENTRE FOR AGRICULTURAL RESEARCH IN THE DRY AREAS (SY)
21. COORDINATION NATIONALE DES ORGANISATIONS PAYSANNES DU MALI ASSOCIATION (ML)
22. MEKELLE UNIVERSITY (ET)
23. UNIVERSITA DI PISA (IT)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(agriculture, forestry); plant health and crop protection

SOLID



Sustainable Organic and Low-input Dairying (SOLID)

Organic and low-input dairy farming systems are increasingly noted as delivering multifunctional benefits to the agricultural industry and society but technical and economic constraints prevent widespread adoption. SOLID will deliver an innovative toolbox of novel methodologies that will contribute to the competitiveness of the dairy industry and increase the effectiveness with which these benefits are delivered. SOLID facilitates the use of breeds and feeding strategies to maintain productivity, improve animal health and welfare while meeting the market requirement for high quality milk. A multidisciplinary team comprising academic and stakeholder (SME) partners from across Europe, encompassing dairy cows and goats, will identify and apply novel strategies at the farm level and throughout the supply chain. Innovative science and models, combined with a participatory approach, will tackle practical issues, and assess competitive sustainability and integration across a range of scales and geographical contexts. Proteomics combined with genotyping and calorimetry will be used to characterise and quantify dairy cow and goat breed adaptation to organic and low-input systems. Given the reliance of such systems on forage, SOLID will develop novel and sustainable feed resources and design a decision-support model to optimise the management of on-farm forage supply. Life cycle assessment tools will assess environmental sustainability of grassland-based multifunctional dairy systems. Analysis of the supply chain from fork to farm will quantify the acceptability of new strategies and enhance collaboration. An integrated assessment tool and socio-economic modelling will assess innovations on farms and along supply chains, and will predict the impact of more widespread adoption of low-input practises. Effective knowledge dissemination and exchange activities will target key stakeholder groups ensuring exploitation of outputs at animal, farm, region, sector and European levels.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,955,858.00

PROJECT N°

266367

DURATION

60 months

PROJECT START DATE

April 2011

LIST OF PARTNERS

1. ABERYSTWYTH UNIVERSITY (UK)
2. AARHUS UNIVERSITET (DK)
3. PROGRESSIVE FARMING TRUST LTD T/A THE ORGANIC RESEARCH CENTRE (UK)
4. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
5. UNIVERSITA POLITECNICA DELLE MARCHE (IT)
6. UNIVERSITEIT GENT (BE)
7. AGRIFOOD AND BIOSCIENCES INSTITUTE (UK)
8. MAA JA ELINTARVIKETA LOUDEN TUTKIMUSKESKUS (FI)
9. ARISTOTELIO PANEPISTIMIO THESSALONIKIS (EL)
10. JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
11. EIGEN VERMOGEN VAN HET INSTITUUT VOOR LANDBOUW EN VISSERIJONDERZOEK (BE)
12. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
13. INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU BIOLOGIE SI NUTRIIE ANIMALA (RO)
14. SERVICE ICAR SRL (IT)
15. ORGANIC MILK SUPPLIERS CO-OPERATIVE LTD (UK)
16. INSTITUTE OF ORGANIC TRAINING AND ADVICE LTD (UK)
17. LEIBNIZ-ZENTRUM FUER AGRARLANDSCHAFTSFORSCHUNG (ZALF) E.V. (DE)
18. CALON WEN ORGANIC MILK CO-OPERATIVE LTD (UK)
19. ISTITUTO PER LA CERTIFICAZIONE ETICA ED AMBIENTALE (IT)
20. AGRICULTURAL DAIRY COOPERATIVE OF ANOGIA PROODOS (EL)
21. JUVAN LUOMU OY (FI)
22. WIM GOVAERTS & CO CVBA (BE)
23. FEDERACION ANDALUZA DE ASOCIACIONES DE GANADO CAPRINO DE RAZA PURA, CABRANDALUCIA (ES)
24. THISE MEJERI AMBA (DK)
25. SC AGRO SOLOMONESCU SRL (RO)

FP7-KBBE-2010-4

Sustainable organic and low-input dairy production

SOLID

www.solidairy.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

STAR TREE



Multipurpose trees and non-wood forest products a challenge and opportunity

Europe has set a clear and ambitious strategy (Europe 2020 Strategy) to base its economy on a smart, sustainable and inclusive growth. Part of this concept is to initiate the development towards an innovative, resource efficient and bio-based (bio-economy) European economy. Such development should contribute to economic growth and the creation of jobs, while mitigating climate change effects and providing effective responses to address the need for carbon neutral energy. In this context, European forests and the forest-based sector play an increasingly important role in fostering smart, sustainable and inclusive growth in Europe based on the production of eco-services and eco-efficient products from wood and non-wood-based products. Up to now the forest-based sector has been mainly build around wood based products. However, also multipurpose trees and non-wood forest products and services can significantly contribute to the achievement of the set goals. The objective of the STAR TREE project is to provide better understanding, knowledge, guidance and tools to support relevant stakeholders (e.g., forest owners, resource managers, enterprises, decision makers, other public and private entities) in optimising the management of multi-purpose trees and developing innovative approaches for increasing the marketability and profitability of NWFP for a more competitive rural economy. The overall impacts of the project are in the long term to support a sustainable rural development through a stronger utilisation of business opportunities based on non-wood forest products and multipurpose trees. This will particularly benefit the rural population as much as land owners and companies through a more competitive and robust rural economy and a better quality of life.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,992,813.00

PROJECT N°

311919

DURATION

48 months

PROJECT START DATE

November 2012

LIST OF PARTNERS

1. EUROPEAN FOREST INSTITUTE (FI)
2. UNIVERSITA DEGLI STUDI DI PADOVA (IT)
3. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
4. UNIVERSITAET HAMBURG (DE)
5. CENTRE TECNOLOGIC FORESTAL DE CATALUNYA (ES)
6. INSTITUTO SUPERIOR DE AGRONOMIA (PT)
7. METSANTUTKIMUSLAITOS (FI)
8. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
9. ALBERT-LUDWIGS-UNIVERSITAET FREIBURG (DE)
10. GOZDARSKI INSTITUT SLOVENIJE (SI)
11. UNIVERSITY STEFAN CEL MARE SUCEAVA (RO)
12. LATVIJAS VALSTS MEZZINATNES INSTITUTS SILAVA (LV)
13. KARADENIZ TEKNIK UNIVERSITESI (TR)
14. FORECO TECHNOLOGIES S.L (ES)
15. FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS FAO (IT)
16. WILD RESOURCES LIMITED (UK)
17. LLAIS Y GOEDWIG LBG (UK)
18. PLANSINN - BURO FUR PLANUNG UND KOMMUNIKATION GMBH* (AT)
19. JOENSUUN TUOTE JA VIHANNES KY (FI)
20. INSTITUTO DE RESTAURACION Y MEDIO AMBIENTE (ES)
21. FVL FORSTWIRTSCHAFTLICHE VEREINIGUNG LUNEBURG GMBH (DE)
22. ASAMER-HANDLER & CO OG (AT)
23. MANTAU UDO (DE)
24. REFORESTING SCOTLAND (UK)

FP7-KBBE-2012-6-singlestage

STAR TREE

Multipurpose trees and non-wood forest products for an innovative forestry in rural areas

www.efi.int



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

SWUP-MED



Sustainable water use securing food production in dry areas of the Mediterranean region

The strategic objective of the project is to improve food crop production in the Mediterranean region, influenced by multiple abiotic stresses. These stresses are becoming even more pronounced under changing climate, predicted to result in drier conditions, increasing temperatures, and greater variability, causing desertification. The project will work mainly in farmers' communities to improve farming systems, by strengthening a diversified crop rotation and using marginal-quality water for supplemental irrigation, aiming at:

- Introduce and test new climate-proof crops and cultivars with improved stress tolerance, selecting promising varieties of cereals, grain legumes and new crops. Climate-proof traits will be identified for breeding programmes using advanced physiological and biochemical screening tools. Supplemental irrigation will be performed as deficit irrigation by different sources of water.
- Investigate the sustainable field applicability of the farming systems, such as environmental effects related to irrigation water quality assessed by monitoring groundwater and soil quality. Financial implications for the farmer and economic costs and benefits in the food sector will be analysed.
- Develop a research synthesis in dialogue with food sector, based on experimental results and advanced simulation modelling to improve farming systems management, utilizing dynamic tools that ease adaptation to the effects of a variable and changing climate. The approach is participatory, involving the farmer's community and the market and political level.

The expected outcome is improved productivity and sustainable use of agricultural lands by developing a more diverse farming system, supporting economic development in non-European Mediterranean countries while ensuring mutual interest and benefit with the EU. It will accelerate adoption of improved agricultural practices and technologies to meet future constraints imposed by climate changes.

FP7-KBBE-2007-1

SWUP-MED

Annual Food crops with improved tolerance to multiple abiotic stresses

www.swup-med.dk



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,728,104.00

PROJECT N°

212337

DURATION

60 months

PROJECT START DATE

July 2008

LIST OF PARTNERS

1. KØBENHAVNS UNIVERSITET (DK)
2. INTERNATIONAL CENTRE FOR AGRICULTURAL RESEARCH IN THE DRY AREAS (SY)
3. INSTITUTO DE TECNOLOGIA QUIMICA E BIOLOGICA - UNIVERSIDADE NOVA DE LISBOA (PT)
4. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
5. NATURAL ENVIRONMENT RESEARCH COUNCIL (UK)
6. CENTRE FOR ENVIRONMENT AND DEVELOPMENT FOR THE ARAB REGION AND EUROPE (EG)
7. INSTITUT AGRONOMIQUE ET VETERINAIRE HASSAN II (MA)
8. UNIVERSITY OF CUKUROVA (TR)
9. THE UNIVERSITY OF WESTERN AUSTRALIA (AU)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

TESTA



Seed health: development of seed treatment methods, evidence for seed transmission and assessment of seed health.

Healthy seed are key to high crop yields, underpinning European and global food security. A wide range of diseases and pests are carried by seed and as well as spreading and increasing old problems, new problems may be introduced into the European Community countries via this route. There are currently opportunities to improve seed quality control by implementing emerging novel methodologies. The TESTA project will develop a range of novel methods to underpin the control of these diseases and pests, including faster, more accurate methods to assess the mode of seed transmission, economic and practical sampling approaches for the detection of low levels in large seed lots, novel and efficient generic detection methodologies, non-destructive testing methods and improved, effective and sustainable disinfection methods. Target crop and disease/pest combinations have been identified in consultation with EPPO, ISHI-ISF and ISTA. Outcomes from the project will include a comprehensive electronic database of seed transmitted diseases and pests, validated detection methods for target species, a validation protocol for assessing the efficacy of disinfection, as well as many key scientific publications. These will provide supporting methods and sources for the EU seed testing laboratories and plant health services.

The consortium comprises experienced researchers who have been involved in key previous research projects funded by the EU and national authorities, representatives of EPPO, ISTA plant health panel and ISHI working groups as well as seed testing laboratories and SMEs involved in seed production. The consortium includes a member from South Africa who is an international expert on seed production in non-EU countries and will provide insight into emerging risks. Involvement of these important players in the management of the project will guarantee that the project plans and outcomes are well-targeted and taken up in a practice so that the project legacy is ensured.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,998,384.00

PROJECT N°

311875

DURATION

40 months

PROJECT START DATE

under negotiation

LIST OF PARTNERS

1. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (THE FOOD AND ENVIRONMENT RESEARCH AGENCY) (UK)
2. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
3. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
4. UNIVERSITA DEGLI STUDI DI TORINO (IT)
5. UNIVERSITY OF PRETORIA (ZA)
6. SCOTTISH GOVERNMENT (UK)
7. AARHUS UNIVERSITET (DK)
8. NATIONAL INSTITUTE OF AGRICULTURAL BOTANY (UK)
9. STICHTING NEDERLANDSE ALGEMENE KWALITEITSDIENST TUINBOUW (NL)
10. UNIVERSITA DEGLI STUDI DI MODENA E REGGIO EMILIA (IT)
11. GROUPE D'ETUDE ET DE CONTROLE DES VARIETES ET DES SEMENCES (FR)
12. EUROPEAN AND MEDITERRANEAN PLANT PROTECTION ORGANISATION (FR)
13. VIDEOMETER A/S (DK)

FP7-KBBE-2012-6-singlestage

Development of seed testing methods for pests and pathogens of plant health concern

TESTA

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

TRITICEAEGENOME



Genomics for Triticeae improvement

For many years the size and complexity of the wheat, barley and rye genomes have hampered the development of genomics and its application to produce Triticeae crops with improved composition and characteristics. Recently, however, new and more efficient scientific capabilities and resources have been developed that allows robust genomic programs to be established for the Triticeae.

TriticeaeGenome is designed to achieve significant progresses in Triticeae genomics and support efficient breeding of improved varieties for the European agriculture by:

- Constructing and anchoring physical maps from the wheat and barley group 1 and 3 chromosomes that carry a large number of important agronomic traits (e.g. disease resistance, yield and quality)
- Isolating genes and QTLs underlying disease resistance, yield and quality traits in wheat and barley
- Identifying and exploiting new alleles for the isolated genes through the use of natural and mutant populations as well as wild germplasm
- Supporting the development of new varieties that meet farmer and consumer needs through molecular breeding
- Developing new bioinformatic tools to structure, relate and comprehensively analyse the large scale genomics data gathered within the project and
- Leading, coordinating and integrating Triticeae genomics research

Triticeaegenome is developed as a main contribution to the international consortia efforts in constructing physical maps of barley and hexaploid wheat for improving plant breeding, accelerating gene and QTL isolation and setting up the foundation for future genome sequencing.

It will deliver novel information and tools to breeders and scientists for a better understanding of Triticeae genomes organization, evolution, and function thereby, providing a better understanding of the biology of these essential crops and enabling significant improvement of their composition and characteristics to satisfy the needs of consumers, processors and producers.

FP7-KBBE-2007-1

Genomics for cereal improvement
for food, feed and non-food uses

TRITICEAEGENOME

www.triticeaegenome.eu



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,300,000.00

PROJECT N°

212019

DURATION

48 months

PROJECT START DATE

June 2008

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. LEIBNIZ - INSTITUT FUER PFLANZENGENETIK UND KULTURPFLANZENFORSCHUNG (DE)
3. USTAV EXPERIMENTALNI BOTANIKY AV CR (CZ)
4. HELMHOLTZ ZENTRUM MUENCHEN DEUTSCHES FORSCHUNGSZENTRUM FUER GESUNDHEIT UND UMWELT GMBH (DE)
5. UNIVERSITA DEGLI STUDI DI MILANO (IT)
6. UNIVERSITY OF HAIFA (IL)
7. MAA JA ELINTARVIKETA LOUDEN TUTKIMUSKESKUS (FI)
8. THE SCOTTISH CROP RESEARCH INSTITUTE (UK)
9. SABANCI UNIVERSITY (TR)
10. NATIONAL INSTITUTE OF AGRICULTURAL BOTANY (UK)
11. JOHN INNES CENTRE (UK)
12. UNIVERSITAET ZUERICH (CH)
13. INRA TRANSFERT S.A. (FR)
14. BIOGEMMA (FR)
15. KWS LOCHOW GMBH (DE)
16. ASSOCIAZIONE ISTITUTO DI GENOMICA APPLICATA (IT)
17. ALMA MATER STUDIUM-UNIVERSITA DI BOLOGNA (IT)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

ARBO-ZOONET



International network for capacity building for the control of emerging viral vector borne zoonotic diseases

West Nile Fever (WNF), Rift Valley Fever (RVF) and Crimean-Congo Haemorrhagic Fever (CCHF) are arthropod-borne diseases of different domestic and wild animals and can also affect humans, posing a great threat to public health because of their epidemic and zoonotic potential. Their geographical distribution has expanded in recent decades. WNF outbreaks have already occurred in Europe, CCHF is endemic in many countries including Europe. In 2000, RVF, was reported the first time outside of the African continent, cases being confirmed in Saudi Arabia and Yemen. This virgin-soil epidemic raises the threat of expansion into other parts of Asia and Europe. There is a general public concern regarding emerging zoonotic diseases which has gained new relevance in the light of global warming. This is especially true regarding the spread of vector-borne diseases such as CCHF, RVF and WNF. It is imperative to work out integrated control measures which include vector control, vaccination programmes, improved therapy strategies, diagnostic tools and surveillance, public awareness, capacity building and improvement of infrastructure in endemic regions.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

908,470.00

PROJECT N°

211691

DURATION

36 months

PROJECT START DATE

May 2008

LIST OF PARTNERS

1. INSTITUT PASTEUR (FR)
2. FORSCHUNGSZENTRUM BORSTEL (DE)
3. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
4. CENTRE DE COOPERATION INTERNATIONALE EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
5. SMITTSKYDDSinSTITUTET (SE)
6. ISTITUTO ZOOPROFILATTICO SPERIMENTALE DELL'ABRUZZO E DEL MOLISE "G. CAPORALE" DI TERAMO (IT)
7. UNIVERZA V LJUBLJANI (SI)
8. NATIONAL HEALTH LABORATORY SERVICES (ZA)
9. HEALTH PROTECTION AGENCY HPA (UK)
10. LANZHOU VETERINARY RESEARCH INSTITUTE (CN)
11. INSTITUT PASTEUR D'IRAN (IR)
12. ROBERT KOCH-INSTITUT (DE)
13. CENTRUM VOOR ONDERZOEK IN DIERGENEESKUNDE EN AGROCHEMIE - CODA (BE)
14. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
15. INSTITUT PASTEUR DE DAKAR (SN)
16. INSTITUTO DE HIGIENE E MEDICINA TROPICAL (PT)
17. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
18. ARISTOTELIO PANEPISTIMIO THESSALONIKIS (EL)
19. ISTITUTO SUPERIORE DI SANITA (IT)
20. UNIVERSIDAD DE ZARAGOZA (ES)
21. THE UNIVERSITY COURT OF THE UNIVERSITY OF ST ANDREWS (UK)
22. MARMARA UNIVERSITY (TR)
23. KAFKAS UNIVERSITESI (TR)
24. FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS FAO (IT)
25. UNIVERSITAETSKLINIKUM BONN (DE)

FP7-KBBE-2007-1

ARBO-ZOONET



Emerging vector-borne diseases, in
particular: West Nile fever, Rift Valley Fever
and Crimean-Congo haemorrhagic fever

www.arbo-zoo.net



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

ASFORCE



Targeted research effort on African swine fever

African Swine Fever (ASF) is a devastating disease affecting swine caused by a complex virus, the only member of the Asfarviridae family. Disease transmission is maintained under different and complex epidemiological scenarios involving domestic and wild swine and arthropod vectors (soft ticks *Ornithodoros* sp). Due to the fact that no vaccine has been obtained so far, prevention, control, and eradication of the disease is mainly based on the early detection and the implementation of strict sanitary measures. The disease is endemic in Sub-Saharan countries of Africa and in EU member states is currently confined to Italy (Sardinia). Since 2007 ASF was declared in Armenia, Georgia, Azerbaijan and in the Russia Federation where continues spreading out of control, posing a serious threat to EU countries. This project will provide i) essential information to design more cost-effective surveillance and control strategies for ASF into different risk scenarios, ii) data essential to identify risk factors for designing new control strategies including wildlife considerations (role of wild boar and argasids) and iii) advance work leading to vaccine development through rational deletion of genes to produce attenuated and non-replicating candidate ASFV vaccine strains and identification of protective antigens and their incorporation into vectored virus vaccines. Additionally the project will improve preparedness for ASF at different levels with workshops targeting pig farmers, hunters, pig veterinarians and governmental agencies in EU and ASF affected countries. Knowledge and new technologies developed within the project will be disseminated through multiple information channels (publications, mass media, Internet). Outputs of this project will provide policy makers with valuable decision support tools to better prevent and control ASF.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,000,000.00

PROJECT N°

311931

DURATION

36 months

PROJECT START DATE

under negotiation

LIST OF PARTNERS

1. UNIVERSIDADE TECNICA DE LISBOA - UTL (PT)
2. FUNDAÇÃO CALOUSTE GULBENKIAN (PT)
3. UNIVERSIDAD COMPLUTENSE DE MADRID (ES)
4. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
5. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
6. CENTRE DE COOPERATION INTERNACIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
7. ISTITUTO ZOOFILATTICO SPERIMENTALE DELL'UMBRIA E DELLE MARCHE (IT)
8. FRIEDRICH LOEFFLER INSTITUT - BUNDESFORSCHUNGSINSTITUT FUER TIERGESUNDHEIT (DE)
9. THE ROYAL VETERINARY COLLEGE (UK)
10. THE INSTITUTE FOR ANIMAL HEALTH (UK)
11. AGENCE NATIONALE DE SECURITE SANITAIRE DE L'ALIMENTATION, DE L'ENVIRONNEMENT ET DU TRAVAIL (FR)
12. STATE RESEARCH INSTITUTION NATIONAL RESEARCH INSTITUTE FOR VETERINARY VIROLOGY AND MICROBIOLOGY OF RUSSIA (RU)
13. INMUNOLOGIA Y GENETICA APLICADA SA (ES)
14. PFIZER OLOT S.L. (ES)
15. BULGARIAN FOOD SAFETY AGENCY (BG)
16. DIOMUNE SL (ES)
17. SAFOSO AG(SAFE FOOD SOLUTIONS) (CH)
18. FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS FAO (IT)

FP7-KBBE-2012-6-singlestage

Targeted research effort on African swine fever

ASFORCE

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

ASFRISK



Evaluating and controlling the risk of African swine fever in the EU

African swine fever (ASF) in EU member states is currently confined to Italy (Sardinia) but it is highly prevalent in sub-Saharan African countries. In both the EC and Africa changes in the epidemiology of the disease have recently been observed, related to newly emerging strains of ASFV, emphasising the serious threat this disease represents to the growing pig farming sector in Africa and Europe. This project will provide new tools and strategies for the control of ASF in Africa and reduce the risk of importation and/or spread of the disease in EU member states. The project will evaluate the current ASF epidemiology in Africa, develop and validate a generic risk assessment for the introduction of ASF into EU countries and subsequent control strategies. The project will also develop and validate new antibody and nucleic acid-based diagnostic tools for ASF, including front line and pen-side tests, which will be supplied to diagnostic facilities in Africa and the Animal Health Laboratories in the EU for the early detection of potential ASFV incursions, in particular by the newly emerging strains. Additionally the project will study the interaction of ASFV and host genes following experimental infection with a view to obtaining attenuated recombinant virus strains that may be potential future candidates for a vaccine and the characterization of pig immune mechanisms relevant for survival following infection with ASFV. The new strategies and the tools developed within this project will be transferred to African partners, and other interested countries, and established in these countries through local training/workshops and technology transfer.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,984,713.00

PROJECT N°

211691

DURATION

42 months

PROJECT START DATE

April 2008

LIST OF PARTNERS

1. FACULDADE DE MEDICINA VETERINARIA- UNIVERSIDADE TECNICA DE LISBOA (PT)
2. FUNDACAO CALOUSTE GULBENKIAN (PT)
3. UNIVERSIDAD COMPLUTENSE DE MADRID (ES)
4. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
5. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
6. CENTRE DE COOPERATION INTERNACIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
7. ISTITUTO ZOOPROFILATTICO SPERIMENTALE DELL'UMBRIA E DELLE MARCHE (IT)
8. FRIEDRICH LOEFFLER INSTITUT - BUNDESFORSCHUNGSINSTITUT FUER TIERGESUNDHEIT (DE)
9. THE ROYAL VETERINARY COLLEGE (UK)
10. STATENS VETERINAERMEDICINSKA ANSTALT (SE)
11. AGRICULTURAL RESEARCH COUNCIL (ARC) (ZA)
12. MINISTÈRE DE LA PRODUCTION ANIMALE ET DES RESSOURCES HALIEUTIQUES (CI)
13. CENTRUM VOOR ONDERZOEK IN DIERGENEESKUNDE EN AGROCHEMIE - CODA (BE)
14. LANZHOU VETERINARY RESEARCH INSTITUTE (CN)
15. NATIONAL INSTITUTE OF VETERINARY RESEARCH (VN)
16. INMUNOLOGIA Y GENETICA APLICADA SA (ES)
17. QUEEN'S UNIVERSITY BELFAST (UK)

FP7-KBBE-2007-1

ASFRISK

Evaluating and controlling the risk of
African Swine Fever in the EU

www.asfrisk.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

AWARE



Animal Welfare Research in an enlarged Europe

The goal of AWARE is to promote integration and increase the impact of European research on farm animal welfare (FAW). It will do so through the development of Europe-wide networks of scientists, lecturers and students, and by establishing a network of stakeholders active in FAW knowledge transfer and implementation. AWARE actions will be organised in 3 mutually supportive Work Packages (WPs). WP A "Research" will enhance the integration of FAW research by fostering collaboration based on mutual recognition and by enhancing networking and proposal writing skills in motivated researchers throughout the enlarged Europe. WP B "Education" will promote cross-fertilisation in FAW university education, thus enhancing opportunities for young scientists in new and candidate countries to start research in FAW. WP C "Awareness and Implementation" focuses on enhancing public awareness, promoting implementation of EU policies, and facilitating uptake of FAW research. All 3 Work Packages proceed in 4 steps: 1. Mapping, 2. Establishing networks, 3. Improving skills and 4. Developing strategies for ongoing integration. Three horizontal activities support the WP's: a Mobility Desk facilitates mobility of researchers and students; the Communication module supports internal and external communication; and Management takes care of project management and effective communication with the Commission.

AWARE will increase the European research capacity in FAW activities, through integrating the underutilized human and knowledge potential in the new and candidate countries. The project will result in faster and more comprehensive FAW knowledge transfer across Europe. It will also build for the future by drawing young scientists into FAW research and providing a base for harmonized implementation of FAW legislation in the enlarged EU.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,927.00

PROJECT N°

265686

DURATION

36 months

PROJECT START DATE

March 2011

LIST OF PARTNERS

1. VYZKUMNY USTAV ZIVOCISNE VYROBY V.V.I. UHRINEVES (CZ)
2. ATATURK UNIVERSITY (TR)
3. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
4. UNIVERSITY OF BRISTOL (UK)
5. EESTI MAAULIKOOL (EE)
6. USTAV BIOCHEMIE A GENETIKY ZIVOCICHOV SLOVENSKEJ AKADEMIE VIED (SK)
7. INSTYTUT GENETYKI I HODOWLI ZWIERZAT POLSKIEJ AKADEMII NAUK (PL)
8. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
9. SVERIGES LANTBRUKSUNIVERSITET (SE)
10. SLOVENSKA POLNOHOSPODARSKA UNIVERSITA V NITRE (SLOVAK AGRICULTURAL UNIVERSITY IN NITRA) (SK)
11. SS. CYRIL AND METHODIUS UNIVERSITY IN SKOPJE (MK)
12. PANEPISTIMIO THESSALIAS (UNIVERSITY OF THESSALY) (EL)
13. UNIVERSITY OF ZAGREB-FACULTY OF VETERINARY MEDICINE (HR)
14. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

FP7-KBBE-2010-4

AWARE



European
Commission

Improving integration in farm animal welfare
research in an enlarged Europe

www.aware-welfare.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

BEE DOC



Bees in Europe and the decline of honeybee colonies

The BEE DOC comprises a network of eleven partners from honeybee pathology, chemistry, genetics and apicultural extension aiming to improve colony health of honeybees. The BEE DOC will empirically and experimentally fill knowledge gaps in honey bee pest and diseases, including the 'colony collapse disorder' and quantify the impact of interactions between parasites, pathogens and pesticides on honey bee mortality. Specifically BEE DOC will show for two model parasites (Nosema and Varroa mites), three model viruses (Deformed Wing Virus, Black Queen Cell Virus, Israel Acute Paralysis Virus) and two model pesticides (fipronil, τ -fluvalinate) how interactions affect individual bees and colonies in different European areas. The BEE DOC will use transcriptome analyses to explore host-pathogen-pesticide interaction and identify novel genes for disease resistance. The BEE DOC will specifically address sublethal and chronic exposure to pesticides and screen how apicultural practices affect colony health. The BEE DOC will develop novel diagnostic screening methods and develop sustainable concepts for disease prevention using novel treatments and selection tools for resistant stock. The BEE DOC will be linked to various national and international ongoing European, North-, and Latin-American colony health monitoring and research programs, which will not only ensure a pan European but also a global visibility and the transfer of results to a world wide community of beekeepers.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,992,577.00

PROJECT N°

244956

DURATION

36 months

PROJECT START DATE

March 2010

LIST OF PARTNERS

1. MARTIN-LUTHER-UNIVERSITAET HALLE-WITTENBERG (DE)
2. QUEEN'S UNIVERSITY BELFAST (UK)
3. SVERIGES LANTBRUKSUNIVERSITET (SE)
4. Eidgenössisches Volkswirtschaftsdepartement (CH)
5. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
6. UNIVERSITEIT GENT (BE)
7. INSTITUTE OF ORGANIC CHEMISTRY WITH CENTRE OF PHYTOCHEMISTRY - BULGARIAN ACADEMY OF SCIENCES (BG)
8. UMEA UNIVERSITET (SE)
9. UNIVERSITAET HOHENHEIM (DE)
10. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
11. USTAV MOLEKULARNEJ BIOLOGIE SLOVENSKEJ AKADEMIE VIED (SK)

FP7-KBBE-2009-3

BEE DOC



Bee health: identification of emerging honey bee pest and diseases and re-emergence of pathogens and explaining the intimate mechanisms and the reasons for the increased honey bee mortality

www.bee-doc.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

CALLISTO



Companion Animals multisectorial interprofessional and Interdisciplinary Strategic Think tank On zoonoses

Since more and increasingly different species of animals are kept as companions one has to face the fact that apart from the well documented positive effects of human-animal interaction there are negative consequences as well. CALLISTO will focus on the risks of zoonotic infectious diseases associated with companion animals. To do so, we will form a multidisciplinary, multisectorial and interprofessional network of experts representing the major relevant stakeholders. In a 3 year program we will provide an overview of the current situation with regard to the role of companion animals as a source of infectious diseases for people and food animals. We will identify knowledge and technology gaps for the most important zoonoses and will propose targeted actions to reduce the risk of zoonotic diseases transferred via companion animals. Furthermore, we will keep our stakeholders and the general public informed of our results in order to contribute to the uptake of the proposed actions and to promote risk-awareness in healthy human-animal relationships. To this purpose, CALLISTO will install a total of seven Expert Advisory Groups (EAG), consisting of experts in complementary fields of interest that will meet at regular intervals in order to exchange perspectives, knowledge and ideas and to produce expert documentation that serves as input from the specific EAG to the CALLISTO Conferences. The following EAGs will be installed: EAG User Community, EAG Policy Actions; EAG Zoonotic Viral Infections; EAG Zoonotic Bacterial Infections, EAG Zoonotic Parasitic Infections, EAG Epidemiology and underlying factors, and EAG Sociology and Welfare. The CALLISTO Synthesis Conferences are the center stage of the project, where experts from all EAGs come together to engage in discussions with each other and with other representatives from outside the network. Results from the Conferences will be widely disseminated.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,998.00

PROJECT N°

289316

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. FEDERATION OF VETERINARIANS OF EUROPE AISBL (BE)
2. KØBENHAVNS UNIVERSITET (DK)
3. INTERNATIONAL ASSOCIATION OF HUMAN-ANIMAL INTERACTION ORGANIZATIONS NON PROFIT CORPORATION (US)
4. ERASMUS UNIVERSITEIT MEDISCH CENTRUM ROTTERDAM (NL)
5. WORLD SMALL ANIMAL VETERINARY ASSOCIATION (CA)
6. FEDERATION OF EUROPEAN COMPANION ANIMAL VETERINARY ASSOCIATIONS (FR)
7. ISTITUTO ZOOPROFILATTICO SPERIMENTALE DELL'ABRUZZO E DEL MOLISE "G. CAPORALE" DI TERAMO (IT)
8. THE HEBREW UNIVERSITY OF JERUSALEM. (IL)
9. UNIVERSITY OF BRISTOL (UK)

FP7-KBBE-2011-5

CALLISTO

European interprofessional network addressing
zoonotic diseases transmitted via companion animals

www.callistoproject.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

CAMCON



Campylobacter control - novel approaches in primary poultry production

CamCon aims to improve the control of Campylobacter in primary poultry production in various parts of Europe and thereby enable the production of “low-risk broilers”.

The project places great emphasis on ensuring rapid and effective dissemination of scientific achievements to end-users, in particular the EU poultry industry.

The consortium consists of 10 participants from seven countries representing various parts of Europe. The participating institutions include national diagnostic laboratories, institutions providing research and advisory services and universities. The scientists involved have a strong background in Campylobacter research and have published many original publications in the field.

CamCon will be a 4-year project with a total budget of €4.17 million where the scientific work is organized in five Work Packages:

- WP1 will study the epidemiology of Campylobacter in broilers in selected regions and climates of the EU and compare the sub-types found in chickens;
- WP2 will investigate the effectiveness and efficacy of pre-harvest interventions;
- WP3 will implement on-site, telecommunication-based, hands-free detection methods and develop quantitative screening methods;
- WP4 will develop “second-generation” farm-to-fork contamination models for more precise quantitative risk assessments; and
- WP5 will prepare guidelines, educational videos, Internet-based tools, and propose EU standards for producers, regulators and consumers, which are based on the results of the research carried out in the other Work Packages.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,940.00

PROJECT N°

244547

DURATION

48 months

PROJECT START DATE

May 2010

LIST OF PARTNERS

1. VETERINAERINSTITUTTET - NATIONAL VETERINARY INSTITUTE (NO)
2. DANMARKS TEKNISKE UNIVERSITET (DK)
3. THE UNIVERSITY OF LIVERPOOL (UK)
4. UNIVERSITEIT UTRECHT (NL)
5. DIANOVA AS (DK)
6. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
7. UNIVERSIDADE DO MINHO (PT)
8. UNIVERSITY OF NEWCASTLE UPON TYNE (UK)
9. FUNDACIO CENTRE DE RECERCA EN SANITAT ANIMAL CRESA (ES)
10. PANSTWOWY INSTYTUT WETERYNARYJNY - PANSTWOWY INSTYTUT BADAWCZY (PL)

FP7-KBBE-2009-3

CAMCON



Improving Campylobacter control measures in
primary production of poultry

www.camcon-eu.net



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

CSFV_GODIVA



Improve tools and strategies for the prevention and control of classical swine fever

Although classical swine fever (CSF) has been eradicated in wide areas within the EU the disease is endemic in some new member states particularly in back yard pigs. In order to improve the eradication strategies the project aims are a) the final development and testing of a live marker vaccine candidate for the prevention and improved control of CSF, both orally and intramuscularly applicable; b) the development and optimisation of accompanying discriminatory diagnostic tests; c) the production of an effective, oral delivery system for the marker vaccine for use in wild boar and back yard pigs; d) the easy selection of diseased animals. The improved knowledge on immunological reactions and pathogenesis will support a more efficient vaccine application and provide data for the epidemiological models. Epidemiological studies of CSF in domestic and back yard pigs and in wild boar including molecular epidemiology intend to increase the insight of CSF transmission and persistence. Epidemiological models will be developed to support risk assessment as well for conventional eradication strategies as for new strategies using the new vaccines and diagnostic tools including the role of CSF reservoirs. The results concerning anti-viral treatment will be evaluated and compared with the traditional eradication strategies.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,983.00

PROJECT N°

227003

DURATION

48 months

PROJECT START DATE

March 2009

LIST OF PARTNERS

1. CENTRUM VOOR ONDERZOEK IN
DIERGENEESKUNDE EN AGROCHEMIE - CODA
(BE)
2. DANMARKS TEKNISKE UNIVERSITET (DK)
3. AGENCE NATIONALE DE SECURITE SANITAIRE
DE L'ALIMENTATION, DE L'ENVIRONNEMENT ET
DU TRAVAIL (FR)
4. MEZOGAZDASAGI SZAKIGAZGATASI HIVATAL
KOZPONT (HU)
5. STICHTING DIENST LANDBOUWKUNDIG
ONDERZOEK (NL)
6. PFIZER OLOT S.L. (ES)
7. FRIEDRICH LOEFFLER INSTITUT -
BUNDESFORSCHUNGSINSTITUT FUER
TIERGESUNDHEIT (DE)
8. ISTITUTO ZOOPROFILATTICO SPERIMENTALE
DELL'UMBRIA E DELLE MARCHE (IT)
9. EIDGENOESSISCHES
VOLKSWIRTSCHAFTSDEPARTEMENT (CH)
10. OFFICE NATIONAL DE LA CHASSE ET DE LA
FAUNE SAUVAGE (FR)
11. SICHUAN UNIVERSITY (CN)
12. STATENS VETERINAERMEDICINSKA ANSTALT
(SE)
13. STIFTUNG TIERAERZTLICHE HOCHSCHULE
HANNOVER (DE)
14. UNIVERSIDAD COMPLUTENSE DE MADRID (ES)
15. HELMHOLTZ-ZENTRUM FUER
UMWELTFORSCHUNG GMBH - UFZ (DE)
16. SPECTOS GMBH (DE)
17. ISTITUTO ZOOPROFILATTICO SPERIMENTALE
DELL'ABRUZZO E DEL MOLISE "G. CAPORALE"
DI TERAMO (IT)

FP7-KBBE-2008-2B

CSFV_GODIVA



Improve tools and strategies for the prevention
and control of classical swine fever

www.csfvaccine.org



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

DISCONTTOOLS



Development of the most effective tools to control infectious diseases in animals

DISCONTTOOLS will provide a mechanism for focusing and prioritising research that ultimately delivers new and improved vaccines, pharmaceuticals and diagnostic tests. The project will make a major contribution to the objectives of the relevant FP7 call. There are three complimentary work strands backed up by the development of a comprehensive communication strategy.

The first strand will provide a validated database and peer reviewed methodology in order to prioritise infectious animal diseases. Gap analysis is the second strand and will be carried out to identify those areas where information and knowledge of the disease is deficient and where current tools are lacking, inadequate or could be improved. Information will be collected in a standard format for validation and entry into a specific disease database. A detailed analysis will then be carried out for each of the priority diseases to identify gaps in key areas.

The third strand is to identify current and new technological tools that may be used to improve the ability to control infectious animal diseases. The work will include review of existing arrangements by stakeholders and the development of methodologies to identify and evaluate new technology. Effective identification and technology transfer is essential if new tools for disease control are to be developed

One of the main features of the project is the involvement of a wide range of stakeholders who will actively participate in the governance of the project. This will ensure that the stakeholders involved from research through to delivery of new control tools will be able to contribute to the project. Dissemination of information from all three strands of work will be essential if the project is to be successful. This will be achieved through the communication strategy which will include Interactive web systems and databases as an integral part of the project.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

978,660.00

PROJECT N°

211316

DURATION

60 months

PROJECT START DATE

March 2008

LIST OF PARTNERS

1. INTERNATIONAL FEDERATION FOR ANIMAL HEALTH EUROPE (BE)

FP7-KBBE-2007-1

DISCONTTOOLS



Optimising research efforts for the
development of the most effective tools for
controlling infectious animal diseases

www.disconttools.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

ECO-FCE



A whole-systems approach to optimising feed efficiency and reducing the ecological footprint of monogastrics

ECO-FCE's objective is to firstly understand the interactions within the monogastric biological system which create diversity, optimise feed use efficiency and reduce greenhouse gas emissions and nitrogen and phosphorus excretion, whilst also improving product quality and not adversely affecting animal health or welfare. Secondly, ECO-FCE will develop industry-ready tools which will facilitate the selection of breeding and nutritional strategies for improved gut health and functionality and host performance. ECO-FCE will achieve these objectives through five scientific work packages. Work package (WP) 1 involves a systematic literature review which will collate information in the open and grey literature on the effect of nutrition, gut characteristics and host genetics on feed use efficiency, nutrient utilization, greenhouse gas emissions and nitrogen and phosphorus excretion in pigs and poultry. WP2 research will focus on the effect of nutrition. Aspects including how and when feed is offered, and diet ingredients (raw materials and feed additives) used, will be investigated. Particular focus will be placed on nutritional strategies to reduce P excretion and to accurately determine and reduce GHG emissions. The effect of environment prior to birth and nutrition after birth in pigs will also be investigated. Data and samples from WP2 will then be used in WP's3 and 4. Initial research in WP's3 and 4 will specifically focus on common gut and host genetic factors which promote good or poor FCE. Subsequent research in WP3 will investigate the feasibility of inoculating pigs and poultry with this 'good' gut microflora. WP4 will focus on host genomics and will specifically attempt to develop SNP chips. Further work in this WP will use the disciplines of transcriptomics and proteomics to investigate the relationships between animal FCE and meat quality. In WP5 novel, industry-ready tools will be developed using the information gathered through WP's 1, 2, 3 and 4.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,814.00

PROJECT N°

311794

DURATION

48 months

PROJECT START DATE

February 2013

LIST OF PARTNERS

1. THE QUEEN'S UNIVERSITY OF BELFAST (UK)
2. AGRIFOOD AND BIOSCIENCES INSTITUTE (UK)
3. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
4. INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES (ES)
5. HERMITAGE PEDIGREE PIGS LTD (IE)
6. DEVENISH NUTRITION LTD (UK)
7. DJ ANDREAS MOSER RTD SERVICES -RTDS (AT)
8. UNIWEYSYTET TECHNOLOGICZNO PRZYRODNICZY IM JANA I JEDRZEJA SNIADOCKICH W BYDGOSZCZY (PL)
9. VETERINAERMEDIZINISCHE UNIVERSITAET WIEN (AT)
10. EIDGENOESSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT (CH)
11. AARHUS UNIVERSITET (DK)
12. LEIBNIZ-INSTITUT FÜR NUTZTIERBIOLOGIE (DE)
13. INDUSTRIAL TECNICA PECUARIA S.A. (ES)
14. DELACON BIOTECHNIK (AT)
15. INSTYTUT BIOCHEMII I BIOFIZYKI POLSKIEJ AKADEMII NAUK (PL)
16. UNIWEYSYTET PRZYRODNICZY W POZNANIU* (PL)
17. COBB EUROPE LIMITED (UK)

FP7-KBBE-2012-6-singlestage

ECO-FCE

Monogastrics Feed Efficiency - Efficiency of terrestrial livestock digestive systems and reduction of the ecological footprint through a combination of systems biology, 'omics' and nutrition

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

EMIDA



Coordination of European Research on Emerging and Major Infectious Diseases of Livestock

The disease threats to the livestock industry have increased steadily over the past decades as a result of globalisation, evolving pathogens and climate change. Responding to animal disease threats relies heavily on science; research makes a significant contribution to the development of disease control policy and the translation of policy, and other drivers for improving animal health, into practical effect. Although the legislation that underpins policy for the control of statutory diseases is determined at the EU level, the research that supports policy development and implementation is primarily carried out at the national level and is largely uncoordinated as is the research on other major infectious diseases currently affecting livestock production. The aim of the Animal Health ERA-NET is to build on and accelerate the work of the SCAR CWG in developing a durable focused network of national research funders in Member and Associated States of the EU for the purpose of sharing information, coordinating activities and working towards a common research agenda and mutual research funding activities in the field of animal health. The scope of the project will include emerging and major infectious diseases of production animals, including fish and bees and including those conditions which pose a threat to human health but excluding food safety issues relating to livestock products and diseases of wildlife except where they act as reservoirs of infection for humans or production animals. The objectives of the ERA-NET will be delivered through the following four workpackages: WP1. Project coordination, management, communication and dissemination; WP2. Mapping and analysis of existing research and current needs and information on the commissioning and management of joint programmes; WP3. Develop, test, evaluate and refine instruments (Pilots) and WP4. Developing a strategic trans-national animal health research agenda.

PROJECT COORDINATOR

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FUNDING SCHEME CSA

EC CONTRIBUTION € 997,218.00

PROJECT N° 219235

DURATION 39 months

PROJECT START DATE April 2008

LIST OF PARTNERS

1. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
2. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
3. BUNDESMINISTERIUM FUER BILDUNG UND FORSCHUNG (DE)
4. FORSCHUNGSZENTRUM JUELICH GMBH (DE)
5. MINISTERIE VAN ECONOMISCHE ZAKEN, LANDBOUW EN INNOVATIE (NL)
6. VOEDSEL EN WAREN AUTORITEIT (NL)
7. MINISTERO DELLA SALUTE (IT)
8. MINISTERO DELLE POLITICHE AGRICOLE ALIMENTARI E FORESTALI (IT)
9. MINISTERIET FOR FODEVARER, LANDBRUG OG FISKERI (DK)
10. MINISTRY OF AGRICULTURE OF THE CZECH REPUBLIC (CZ)
11. BUNDESMINISTERIUM FUER GESUNDHEIT (AT)
12. FEDERALE OVERHEIDSDIENST VOLKSGEZONDHEID, VEILIGHEID VAN DE VOEDSELKETEN EN LEEFMILIEU (BE)
13. AGENCE FEDERALE POUR LA SECURITE DE LA CHAINE ALIMENTAIRE (BE)
14. CENTRUM VOOR ONDERZOEK IN DIERGENEESKUNDE EN AGROCHEMIE. CODA (BE)
15. MINISTRY OF AGRICULTURE AND FORESTRY (FI)
16. AN ROINN TALMHAÍOCHTA, IASCACH AGUS BIA (IE)
17. NORGES FORSKNINGSRAD (NO)
18. FORSKNINGSRÅDET FÖR MILJÖ, AREELLA NÄRINGAR OCH SAMHÄLLSBYGGANDE (SE)
19. BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL (UK)
20. EIDGENÖSSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT (CH)
21. SCOTTISH GOVERNMENT (UK)
22. MINISTRY OF AGRICULTURE, NATURAL RESOURCES AND ENVIRONMENT OF CYPRUS (CY)
23. LIETUVOS RESPUBLIKOS ZEMES UKIO MINISTERIJA (LT)
24. MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT (IL)
25. MINISTRY OF AGRICULTURE AND RURAL AFFAIRS (TR)
26. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
27. AGENCE NATIONALE DE LA RECHERCHE (FR)
28. BUNDESMINISTERIUM FÜR ERNÄHRUNG, LANDWIRTSCHAFT UND VERBRAUCHERSCHUTZ (DE)
29. BUNDESANSTALT FÜR LANDWIRTSCHAFT UND ERNÄHRUNG (DE)

FP7-ERANET-2007-RTD

EMIDA



Coordination of European research in the area of animal health, including emerging threats, infectious diseases and surveillance

www.emida-era.net



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

FECUND



Optimisation of early reproductive success in dairy cattle through the definition of new traits and improved reproductive biotechnology

Good fertility is essential for the sustainability of livestock production. Of all livestock sectors, fertility of dairy cattle is raising the greatest cause for concern. Cow fertility has declined, particularly in Holstein cattle, from 80% pregnancy to first service 20 years ago to less than 40% today. Poor fertility is one of the main reasons for early culling, such that modern dairy cows complete fewer than 3 lactations, on average. The FECUND project will address the metabolic and genetic causes of low reproductive success of dairy cows in an interdisciplinary approach that will integrate in vivo and in vitro studies, biology, physiology, -omics technologies and bioinformatics. FECUND will focus on the early phases of reproduction from oocyte development to implantation of the conceptus. Starting from biological materials produced from high and low genetic merit cattle and from cows under energy stress of early lactation vs dry cows and heifers, FECUND will study, independently, the effects of genetics and metabolic stress on reproductive physiology to identify factors and early markers associated with high and low developmental potential, and with positive mother-conceptus interaction during the early stages of reproduction. These data will be mined to reveal physiological pathways and key candidate genes controlling variations of fertility. The biological knowledge created on early reproductive events in vivo will be validated in vitro, and extended to create further knowledge on the effects of the local environment on oocyte and embryo programming at the epigenetic level. Validated information will be used to improve herd management, gene assisted and genomic selection and assisted reproductive technologies, from in vitro oocyte maturation to optimised embryo culture. Information on biomarkers, indicator traits and improvements in assisted reproduction will be translated to applications that can be immediately implemented by SMEs.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,393.00

PROJECT N°

312097

DURATION

48 months

PROJECT START DATE

February 2013

LIST OF PARTNERS

1. FONDAZIONE PARCO TECNOLOGICO PADANO (IT)
2. LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN (DE)
3. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
4. UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN (IE)
5. VETERINAERMEDIZINISCHE UNIVERSITAET WIEN (AT)
6. INSTYTUT GENETYKI I HODOWLI ZWIERZAT POLSKIEJ NAUK (PL)
7. AVANTEA SRL (IT)
8. BAYERN GENETIK GMBH (DE)
9. NATIONAL CATTLE BREEDING CENTRE LIMITED (IE)
10. UNION NATIONALE DES COOPERATIVES AGRICOLES D'ELEVAGE ET D'INSEMINATION ANIMALE (FR)
11. OSRODEK HODOWLI ZARODOWEJ OSIECINYSZ ZOO (PL)
12. EUROPEAN FORUM OF FARM ANIMAL BREEDERS (NL)
13. UNIVERSITA CATTOLICA DEL SACRO CUORE (IT)

FP7-KBBE-2012-6-singlestage

FECUND



Optimised terrestrial farm animal reproduction
systems and/or technologies

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

FMD-DISCONVAC



Development, enhancement and complementation of animal-sparing, foot-and-mouth disease vaccine-based control strategies for free and endemic regions

Foot-and-mouth disease (FMD) is one of the world's most infectious diseases of livestock and continues to pose a significant threat to endemic and free regions alike. The impact of FMD on society and international trade is high, thereby demanding stringent prevention, surveillance and control plans taken up in crisis preparedness plans. On the other hand, there is a global increased demand for animal welfare and ethical considerations necessitating a decreased reliance on eradication of animals to control FMD virus (FMDV) spread, and on the use of animals for the regulatory testing of veterinary products.

The project seeks to balance these apparently contracting viewpoints by addressing specific gaps in our knowledge on all aspects of FMD control to enable implementation of enhanced animal-sparing vaccine-based control strategies tailored to the needs of free and endemic settings. Consequently, four main objectives have been identified, including (i) the improvement of the quality of existing FMD vaccines and diagnostics, (ii) the refinement and replacement of in vivo FMD vaccine quality tests, (iii) the development of new generation FMD vaccines and diagnostics by applying cutting edge technologies, and (iv) the enhancement of our knowledge on FMDV spread and transmission following the use of high-potency monovalent or multivalent vaccines. The role of wildlife (buffalo, gazelles and wild boar) in FMDV maintenance and transmission will also be investigated.

The project consists of seven different, yet interlinked, work packages (WP) each addressing one of the items listed in the Work Programme topic KBBE-2008-1-3-02, and led by renowned WP leaders with years of relevant experience in the field of FMD. As such, significant progress towards the objectives of the Community's Animal Health Strategy (2007-2013), the European Technology Platform for Global Animal Health, and the Global Roadmap for improving the Tools to Control FMD in Endemic Settings will be achieved.

Foot-and-mouth disease: improve and / or develop vaccine, vaccination strategies and diagnostics assays for free and endemic settings – SICA

fmddisconvac.net

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,998,863.00

PROJECT N°

226556

DURATION

51 months

PROJECT START DATE

April 2009

LIST OF PARTNERS

1. CENTRUM VOOR ONDERZOEK IN DIERGENEESKUNDE EN AGROCHEMIE - CODA (BE)
2. THE INSTITUTE FOR ANIMAL HEALTH (UK)
3. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
4. ISTITUTO ZOOPIROLATTICO SPERIMENTALE DELLA LOMBARDIA E DELL'EMILIA ROMAGNA BRUNO UBERTINI (IT)
5. FRIEDRICH LOEFFLER INSTITUT - BUNDESFORSCHUNGSINSTITUT FUER TIERSUNDHEIT (DE)
6. INDIAN IMMUNOLOGICALS LTD (IN)
7. LANZHOU VETERINARY RESEARCH INSTITUTE (CN)
8. FUNDACIÓN PARA LA INTERACCIÓN DE LOS SISTEMAS PRODUCTIVO, EDUCATIVO, CIENTÍFICO-TECNOLÓGICO (AR)
9. AGENCE NATIONALE DE SECURITE SANITAIRE DE L'ALIMENTATION, DE L'ENVIRONNEMENT ET DU TRAVAIL (FR)
10. EIDGENÖSSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT (CH)
11. KIMRON VETERINARY INSTITUTE (IL)
12. UNIVERSITY OF GLASGOW (UK)
13. DANMARKS TEKNISKE UNIVERSITET (DK)
14. MERIAL SAS (FR)

FP7-KBBE-2008-2B

FMD-DISCONVAC



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

GENE2FARM



Next generation European system for cattle improvement and management

The Gene2Farm project will address the needs of the cattle industry, in particular of the SMEs and end users, for an accessible, adaptable and reliable system to apply the new genomic knowledge to underpin sustainability and profitability of European cattle farming. Gene2Farm will undertake a comprehensive programme of work from statistical theory development, through genome sequencing, to addressing new phenotyping approaches and the construction of selection tools, that will be validated in conjunction with SMEs and industry partners. Advanced statistical theory and applications will use genomic and phenotypic information to optimise and customise genomic selection, breeding and population management and between breed genetic predictions. The project will sequence key animals and exchange data with other international projects to create a comprehensive bovine genome sequence database. Detailed analysis of these genome sequences will define genome structure, shared alleles, frequencies and historic haplotypes, within and between populations. This information will be used to optimise the informativeness of SNP panels and select SNPs to tag haplotypes, and hence ensure that genotype information can be used within and between breeds. The project will explore the opportunities for extended phenotypic collection, including the use of automated on farm systems and will develop standardisation protocols that, in consultation with ICAR, could be used by the industry for data collection and management. The tools developed will be tested and validated by demonstration in collaboration with dairy, dual purpose, beef and minority cattle breed organisations. Finally a dissemination programme will ensure that training needs of the industry are served, from an entry level training programme for farmers to advanced summer schools for the SMEs and expert user community.

PROJECT COORDINATOR

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FUNDING SCHEME

BSG

EC CONTRIBUTION €

2,999,593.00

PROJECT N°

289592

DURATION

48 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. FONDAZIONE PARCO TECNOLOGICO PADANO (IT)
2. ZUCHTDATA EDV-DIENSTLEISTUNGEN GMB (AT)
3. GENO SA (NO)
4. GENOSSENSCHAFT SWISSHERDBOOK ZOLLIKOFEN (CH)
5. ASSOCIAZIONE NAZIONALE ALLEVATORI BOVINI DELLA RAZZA BRUNA (IT)
6. SVAZ CHOVATELU CESKEHO STRAKATEHO SKOTU (CZ)
7. ASSOCIAZIONE NAZIONALE ALLEVATORI BOVINI DI RAZZA PEZZATA ROSSA ITALIANA (IT)
8. THE ENGLISH GUERNSEY CATTLE SOCIETY (UK)
9. FEDERACION ESPANOLA DE ASOCIACIONES DE GANADO SELECTO (ES)
10. SCHWEIZER BRAUNVIEHZUCHTVERBAND (CH)
11. EUROPÄISCHE VEREINIGUNG DER FLECKVIEHZUCHTER VEREIN (DE)
12. BIOSCIENCE NETWORK LIMITED (UK)
13. UNIVERSITETET FOR MILJO OG BIOVITENSKAP (NO)
14. THE UNIVERSITY OF EDINBURGH (UK)
15. UNIWERSYTET PRZYRODNICZY WE WROCLAWIU (PL)
16. UNIVERSIDAD DE ZARAGOZA (ES)
17. ARISTOTELIO PANEPISTIMIO THESSALONIKIS (EL)
18. SCOTTISH AGRICULTURAL COLLEGE (UK)

FP7-KBBE-2011-5

GENE2FARM



Development of next generation European
system for cattle evaluation

www.gene2farm.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

GLOWORM



Innovative and sustainable strategies to mitigate the impact of global change on helminth infections in ruminants

Infections with parasitic worms (nematodes and trematodes) represent a significant economic and welfare burden to the European ruminant livestock industry. The increasing prevalence of anthelmintic resistance means that current control programmes are costly and unsustainable in the long term. Recent changes in the epidemiology, seasonality and geographic distribution of helminth infections have been attributed to climate change. However, other changes in environment (e.g. land use) and in livestock farming, such as intensification and altered management practices, will also have an impact on helminth infections. Sustainable control of helminth infections in a changing world requires detailed knowledge of these interactions. GLOWORM will devise new, sustainable strategies for the effective control of ruminant helminthoses in the face of global change. We will: (1) optimise diagnosis, by developing novel, high-throughput diagnostic tests for mixed helminth infections, sub-clinical infections and anthelmintic resistance, (2) map, monitor and predict the impact of global change on parasite epidemiology, leading to spatial risk maps and improved forecasting of disease, (3) produce predictive models to identify optimal future intervention strategies, (4) identify and mitigate the economic impacts of infections and (5) involve end-users in the production and dissemination of detailed advice for effective worm control.

We will work together to develop a panel of innovative technologies and models to monitor and predict changing patterns of infection and disease, optimise the use of anthelmintics to limit the development and spread of drug resistance, and reduce the overall economic impact of helminth infections. GLOWORM will contribute to the continued productivity and profitability of European livestock farming by delivering new tools, strategies and recommendations for the monitoring, surveillance, and sustainable control of helminth infections in grazing livestock.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,998,406.00

PROJECT N°

288975

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. UNIVERSITEIT GENT (BE)
2. AVIA-GIS BVBA (BE)
3. UNIVERSITY OF BRISTOL (UK)
4. E & P COOPERATIVA PER L'EPIDEMIOLOGIA E LA PREVENZIONE A.R.L. G.A. MACCACCARO (IT)
5. FREIE UNIVERSITAET BERLIN (DE)
6. LABOKLIN LABOR FUR KLINISCHE DIAGNOSTIK GMBH & CO KG (DE)
7. THE UNIVERSITY OF LIVERPOOL (UK)
8. MOREDUN RESEARCH INSTITUTE (UK)
9. SVERIGES LANTBRUKSUNIVERSITET (SE)
10. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
11. UNIFORM-AGRI BV (NL)
12. UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN (IE)
13. UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II. (IT)
14. UNIVERSITAET ZUERICH (CH)

FP7-KBBE-2011-5

GLOWORM



Management and control of increased
livestock helminths parasite infection risks
due to global changes

www.gloworm.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

ICONZ



Integrated control of neglected zoonoses: improving human health and animal production through scientific innovation and public engagement

This project aims at Improving Human Health and Animal Production in developing countries through Integrated Control of Neglected Zoonoses in animals, based on Scientific Innovation and Public Engagement. Neglected zoonoses, such as anthrax, rabies, brucellosis, bovine TB, zoonotic trypanosomiasis, echinococcosis, cysticercosis and leishmaniasis, are major causes of ill-health in developing countries in Africa, Asia and Latin America. Production animals and companion animals of significant societal value act as reservoirs for transmission to man, and the burden of these diseases on affected communities is compounded by the adverse effects many diseases have on the productivity of livestock and hence the livelihoods of the poor. Control of these diseases in animals represents an opportunity to address the constraints they pose to both human health and animal productivity, thereby contributing to poverty reduction and the MDGs. Effective control in animals will require scientific innovation to identify and (where necessary) develop tools for diagnosis, for quantification of disease burdens, and for control. Public engagement at all stakeholder levels will be needed to ensure that strategies are appropriate for use in affected communities and are adopted within the policy framework of affected countries. The project will: (i) map and review research activities at a global level, (ii) survey and assess the burden of zoonoses in communities, (iii) improve or develop disease control tools as appropriate for conditions in affected countries, with private sector inputs where appropriate, (iv) develop cost-effective control and prevention strategies taking into account economic, sociological and cultural factors as well as traditional knowledge, (v) build capacity in ICPCs through technology transfer and training and (vi) empower communities and policy makers to utilise control and prevention strategies appropriately and effectively.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,994,998.00

PROJECT N°

221948-2

DURATION

60 months

PROJECT START DATE

April 2009

LIST OF PARTNERS

1. THE UNIVERSITY OF EDINBURGH (UK)
2. PRINS LEOPOLD INSTITUUT VOOR TROPISCHE GENEESKUNDE (BE)
3. KØBENHAVNS UNIVERSITET (DK)
4. UNIVERSITE CLAUDE BERNARD LYON 1 (FR)
5. FRIEDRICH LOEFFLER INSTITUT - BUNDESFORSCHUNGSINSTITUT FUER TIERGESUNDHEIT (DE)
6. UNIVERSIDADE DO MINHO (PT)
7. UNIVERSIDAD DE NAVARRA (ES)
8. KAROLINSKA INSTITUTET (SE)
9. SCHWEIZERISCHES TROPEN- UND PUBLIC HEALTH-INSTITUT (CH)
10. THE UNIVERSITY OF LIVERPOOL (UK)
11. LABORATOIRE CENTRAL VETERINAIRE (ML)
12. INSTITUT AGRONOMIQUE ET VETERINAIRE HASSAN II (MA)
13. UNIVERSIDADE EDUARDO MONDLANE (MZ)
14. NATIONAL VETERINARY RESEARCH INSTITUTE (NG)
15. MAKERERE UNIVERSITY (UG)
16. STELLENBOSCH UNIVERSITY (ZA)
17. SOKOINE UNIVERSITY OF AGRICULTURE (TZ)
18. UNIVERSITY OF ZAMBIA (ZM)
19. AVIA-GIS BVBA (BE)
20. INTERNATIONAL LIVESTOCK RESEARCH INSTITUTE (KE)
21. AGENCE NATIONALE DE SECURITE SANITAIRE DE L'ALIMENTATION, DE L'ENVIRONNEMENT ET DU TRAVAIL (FR)

FP7-KBBE-2007-2A

ICONZ



Neglected zoonoses in developing countries:
integrated approach for the improvement of
their control in animals

www.iconzafrica.org/people



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

INTERPLAY



Interplay of microbiota and gut function in the developing pig – Innovative avenues towards sustainable animal production

Low input farming occurs under non-SPF (specific pathogen free) conditions. The European ban on in-feed antibiotics exposes the piglets to a higher microbial environmental pressure. The postnatal priming of piglets with a diverse microbiota may affect the development of the piglet's host-defense and gut functionality. By reversal, the piglets developing host-defense may affect the development of the gastro-intestinal microbiota. Moreover, this intricate interplay between gut microbiota and its host during the early phases of life is expected to also affect animal health and performance later in life.

The gut microbiome is an immensely diverse ecosystem that has co-evolved with its host. Recent research on microbe-host interactions has provided novel insights into the role of commensal intestinal microbes in several physiological processes, i.e., from epithelial barrier development to immune development as well as neurological aspects. Nevertheless, we only start to understand the molecular mechanisms of the host-microbe cross-talk. Recent conceptual as well as technological advances have set the stage for the integrated application of a complementary set of high throughput approaches for the comprehensive profiling of GIT microbiota composition and functionality as well as the animal's intestinal function.

In a multidisciplinary consortium, comprising 11 public and private partners from across and beyond Europe with complementary expertise in gut microbiomics, immunology and physiology, and animal genomics and nutrition, INTERPLAY will apply an integrated approach to arrive at a sound understanding of the interaction of early colonization of the intestine and the development of gut function. This knowledge will be exploited for the identification of innovative management strategies that address host genotype as well as nutritional means to provide a framework for sustainable animal production at high food and consumer safety and improved animal health and welfare.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,711.00

PROJECT N°

227549

DURATION

48 months

PROJECT START DATE

September 2009

LIST OF PARTNERS

1. WAGENINGEN UNIVERSITEIT (NL)
2. UNIVERSITY OF BRISTOL (UK)
3. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
4. OTTO-VON-GUERICKE-UNIVERSITAET MAGDEBURG (DE)
5. ISTITUTO NAZIONALE DI RICERCA PER GLI ALIMENTI E LA NUTRIZIONE (IT)
6. NANJING AGRICULTURAL UNIVERSITY (CN)
7. PARCO TECNOLOGICO PADANO S.R.L. (IT)
8. MIKROBIOLOGICKY USTAV - AVCR, V.V.I. (CZ)
9. HELSINGIN YLIOPISTO (FI)
10. ALMA MATER STUDIUM-UNIVERSITA DI BOLOGNA (IT)
11. ID-LELYSTAD, INSTITUUT VOOR DIERHOUDRIJ EN DIERGEZONDHEID B.V. (NL)
12. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

FP7-KBBE-2008-2B

INTERPLAY



Improving production animal health and food
safety through investigating the gut function of
farm animals, the gastro-intestinal microflora
and their interactions

www.interplay.wur.nl



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

LOWINPUTBREEDS



Development of integrated livestock breeding and management strategies to improve animal health, product quality and performance in European organic and 'low input' milk, meat and egg production.

The proposed integrating project LOWINPUTBREEDS aims to develop integrated LIVESTOCK BREEDING and MANAGEMENT strategies to improve ANIMAL HEALTH, product QUALITY and PERFORMANCE in European organic and 'low input' milk, meat and egg production through research, dissemination and training activities. The consortium includes 11 academic centres of excellence and 6 genetics/breeding companies (4 SMEs) in 11 European, 2 ICPC and 2 industrialised third countries. The proposed project has 4 main Science and Technology OBJECTIVES:

1. To DEVELOP and evaluate INNOVATIVE BREEDING CONCEPTS, including (a) genome wide and (b) marker assisted selection, and (c) cross-, (d) 'flower'- and (e) farmer participatory breeding strategies, which will deliver genotypes with 'robustness' and quality traits required under 'low input' conditions. The project will focus on 5 LIVESTOCK PRODUCTION SYSTEMS (dairy cows, dairy and meat sheep, pigs and laying hens) and design SPECIES-SPECIFIC BREEDING STRATEGIES for different macroclimatic regions in Europe.
2. To INTEGRATE the use of IMPROVED GENOTYPES with INNOVATIVE MANAGEMENT approaches including improved diets, feeding regimes and rearing systems. This will focus on issues (e.g. mastitis and parasite control, animal welfare problems) where breeding or management innovations alone are unlikely to provide satisfactory solutions.
3. To IDENTIFY potential ECONOMIC, ENVIRONMENTAL, GENETIC DIVERSITY and ETHICAL IMPACTS of project deliverables to ensure they conform to different societal priorities and consumer demands/expectations and are acceptable to producers.
4. To ESTABLISH an efficient TRAINING and DISSEMINATION programme aimed at rapid exploitation and application of project deliverables by the organic and 'low input' livestock industry.

Improving animal health, product quality and performance of organic and low-input livestock systems through integration of breeding and innovative management techniques

FP7-KBBE-2007-2A

LOWINPUTBREEDS

www.lowinputsbreeds.org



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,995.00

PROJECT N°

222623-2

DURATION

60 months

PROJECT START DATE

May 2009

LIST OF PARTNERS

1. UNIVERSITY OF NEWCASTLE UPON TYNE (UK)
2. FORSCHUNGSINSTITUT FÜR BIOLOGISCHENLANDBAU STIFTUNG (CH)
3. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
4. GEORG-AUGUST-UNIVERSITÄT GOETTINGEN STIFTUNG OEFFENTLICHEN RECHTS (DE)
5. UNIVERSITÀ DEGLI STUDI DI CATANIA (IT)
6. NATIONAL AGRICULTURAL RESEARCH FOUNDATION. (EL)
7. JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FUER LANDLICHE RAUME, WALD UND FISCHEREI (DE)
8. KØBENHAVNS UNIVERSITET (DK)
9. UNIVERZA V LJUBLJANI (SI)
10. UNIVERSITE CATHOLIQUE DE LOUVAIN (BE)
11. SWISSGENETICS (CH)
12. SCHWEIZER BRAUNVIEHZUCHTVERBAND (CH)
13. APPLIED GENETICS NETWORK (CH)
14. INSTITUTE FOR PIG GENETICS BV (NL)
15. PIGTURE IBERICA S.L. (ES)
16. INSTITUT DE SÉLECTION ANIMALE BV (NL)
17. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE DE TUNISIE (TN)
18. LINCOLN UNIVERSITY (NZ)
19. UNIVERSITY OF GUELPH (CA)
20. UNIVERSIDADE FEDERAL DE VIÇOSA (BR)
21. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
22. LOUIS BOLK INSTITUUT (NL)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

OH-NEXTGEN



Training of the One Health Next Scientific Generation in the Sahel and Maghreb

Humans and animals living in poor communities in the developing world often suffer from health problems arising from neglected zoonoses. Control options for these diseases are perceived as either too expensive or to be beyond the mandate of either the human or animal health systems. There is evidence that zoonoses in humans can be suppressed or even eliminated through interventions in animals. Moreover, joining human and animal health services can provide access to care that would otherwise not be affordable or not be available. The close collaboration between the public and animal health sectors, also called One Health, with clearly defined roles for each sector, offers a formidable potential for creative and cost-effective solutions in disease control.

Despite the emerging evidence on the effectiveness of One Health in surveillance and control of zoonoses, institutional barriers limit the added value of closer cooperation between human and animal health.

OH-NEXTGEN will develop a web-based modular training course designed to empower a new generation of scientists to address One Health issues faced by communities in Africa. While this programme is targeted to the Maghreb and the Sahel, the course will be accessible world-wide by offering training modules through the European Tropical Health Education Network (tropED) and other existing networks.

The course will include selected neglected zoonoses and generic themes such as integrated methods of joint human and animal disease surveillance and epidemiology, health economic assessments, animal-human modelling of infectious disease, trans-disciplinary approaches to connect science and society and address issues of culture, gender and contextualized extension and health education. In each module the added value of One Health is demonstrated. The project will complement the existing EU FP7 ICONZ project, which builds up the evidence base for integrated control approaches to neglected zoonoses in 7 African countries.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

1,997,402.00

PROJECT N°

289412

DURATION

48 months

PROJECT START DATE

October 2011

LIST OF PARTNERS

1. PRINS LEOPOLD INSTITUUT VOOR TROPISCHE GENEESKUNDE (BE)
2. SCHWEIZERISCHES TROPEN- UND PUBLIC HEALTH-INSTITUT (CH)
3. THE UNIVERSITY OF EDINBURGH (UK)
4. KAROLINSKA INSTITUTET (SE)
5. AVIA-GIS BVBA (BE)
6. UNIVERSITY OF PRETORIA (ZA)
7. INSTITUT AGRONOMIQUE ET VETERINAIRE HASSAN II (MA)
8. ECOLE INTER-ETATS DES SCIENCES ET MEDECINE VETERINAIRES DE DAKAR (SN)
9. UNIVERSITY OF GHANA (GH)

FP7-KBBE-2011-5

OH-NEXTGEN



New/next generation of researchers for
Neglected Zoonoses at the animal-human
interface – Mandatory ICPC

www.oh-nextgen.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

ORBIVAC



Development of Vaccines for bTV, EHDV and AHSV

This proposal attempts to address the major outstanding issues in BTV vaccinology: to demonstrate proof of principle for a new type of BTV vaccine that will have improved safety over attenuated vaccines, be effective against multiple serotypes of the virus, compatible with current manufacturing processes and compliant with the DIVA principle. This vaccine will build on the technology recently developed in the proposer's laboratory and so not available to other public and commercial organisations. The new vaccine will not be a competitor to current commercial activities as the project aim is to transfer vaccine development to a commercial partner once proof-of concept is established.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,729.00

PROJECT N°

245266

DURATION

36 months

PROJECT START DATE

February 2010

LIST OF PARTNERS

1. LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE (UK)
2. AGENCE FRANCAISE DE SECURITE SANITAIRE DES ALIMENTS (FR)
3. UNIVERSIDAD COMPLUTENSE DE MADRID (ES)
4. CENTRE DE COOPERATION INTERNACIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
5. MERIAL SAS (FR)
6. FORT DODGE VETERINARIA, S.A. (ES)
7. INTERVET INTERNATIONAL B.V. (NL)
8. BOEHRINGER INGELHEIM VETMEDICA (DE)
9. FRIEDRICH LOEFFLER INSTITUT - BUNDESFORSCHUNGSINSTITUT FUER TIERGESUNDHEIT (DE)
10. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
11. DELTAMUNE (PTY) LTD (ZA)
12. KANSAS STATE UNIVERSITY (US)
13. THE INSTITUTE FOR ANIMAL HEALTH (UK)
14. CENTRUM VOOR ONDERZOEK IN DIERGENEESKUNDE EN AGROCHEMIE - CODA (BE)
15. ID VET SARL (FR)
16. INMUNOLOGIA Y GENETICA APLICADA SA (ES)

FP7-KBBE-2009-3

ORBIVAC



Diseases caused by Orbiviruses: African horse sickness, bluetongue and epizootic haemorrhagic disease: development of new generation vaccines and accompanying tests

www.orbivac.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

PARAVAC



Vaccines against helminth infections

Livestock production efficiency is impaired by helminth infection which is ubiquitous in cattle, sheep and goats world-wide. It causes severely debilitating gastro-intestinal, respiratory and hepatic disorders, dependent on the infecting species. The treatment and prevention of helminth parasitism in livestock continues to rely almost exclusively on the use of anthelmintic drugs, an approach threatened by the global emergence of anthelmintic resistance. An alternative approach is vaccination.

Members of the present consortium (11 EU, 1 North American, 3 South American, 2 North African laboratories, 2 SMEs and 1 commercial company) have developed prototype vaccines with the predicted required efficacy to control major gastro-intestinal nematode infections of livestock, notably *Ostertagia ostertagi* in cattle and *Haemonchus contortus* in sheep, the liver fluke *Fasciola hepatica* in sheep and cattle with leading positions in subunit vaccine development against *Cooperia onchophora*, *Dictyocaulus viviparus* in cattle and the tapeworm *Echinococcus granulosus* in dogs.

This proposal aims to deliver at least one prototype vaccine to the point of uptake by the commercial sector or through government/philanthropic agencies and this will be addressed by:

- 1) Defining the protective immune responses to these helminth parasites induced by the vaccines available in the consortium to identify correlates with protection. Outcomes from this will be used to inform.
- 2) Optimising vaccine delivery.
- 3) Developing effective native or recombinant protein vaccines, the latter using novel, customized eukaryotic expression systems.
- 4) Defining vaccine efficacy in housed and field trials.
- 5) Providing a platform for training and knowledge exchange which includes participation in training programmes, short exchanges of staff, training workshops, web site provision.
- 6) Interacting closely with the Animal Health industry, farmer organisations and other stakeholders to define required vaccine characteristics.

Development of vaccines and improvement of
detection systems to control helminth parasite
infections of livestock and reservoirs – SICA (Latin
America and/or Asia and/or African Mediterranean
Partner Countries and/or African ACP)

FP7-KBBE-2010-4

PARAVAC

<http://paravac.eu>



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

8,944,185.00

PROJECT N°

265862

DURATION

48 months

PROJECT START DATE

April 2011

LIST OF PARTNERS

1. MOREDUN RESEARCH INSTITUTE (UK)
2. UNIVERSITEIT GENT (BE)
3. VIB (BE)
4. UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN (IE)
5. UNIVERSITE LYON 1 CLAUDE BERNARD (FR)
6. STIFTUNG TIERAERZTLICHE HOCHSCHULE HANNOVER (DE)
7. ACADEMISCH ZIEKENHUIS LEIDEN - LEIDS UNIVERSITAIR MEDISCH CENTRUM (NL)
8. UNIVERSITY OF GLASGOW (UK)
9. THE UNIVERSITY OF LIVERPOOL (UK)
10. UNIVERSIDAD DE CORDOBA (ES)
11. ROYAL INSTITUTION FOR THE ADVANCEMENT OF LEARNING MCGILL UNIVERSITY (CA)
12. INSTITUT AGRONOMIQUE ET VETERINAIRE HASSAN II (MA)
13. UNIVERSIDAD DE LA REPUBLICA (UY)
14. AGRICULTURAL RESEARCH COUNCIL (ARC) (ZA)
15. UNIVERSIDADE ESTADUAL PAULISTA - UNESP (BR)
16. ISCONOVA AB (SE)
17. UNIVERSITAET ZUERICH (CH)
18. ECOLE NATIONALE DE MEDECINE VETERINAIRE (TN)
19. PFIZER LIMITED (UK)
20. LARA MEDIA LIMITED (IE)
21. UNIVERSIDAD NACIONAL DE CAJAMARCA (PE)
22. TRIVERTAS LIMITED (UK)
23. MURDOCH UNIVERSITY (AU)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

PIROVAC



Improvement of current and development of new vaccines for theileriosis and babesiosis of small ruminants

The proposal deals with the establishment of control measures for two major tick-borne diseases of small ruminants: theileriosis caused by *Theileria lestoquardi* and *T. uilenbergi* and babesiosis caused by *Babesia ovis*. The research programme aims at improving existing and producing new attenuated vaccines, designing subunit vaccines and capability building. To achieve these goals the proposal will assess parasite diversity and identify molecules associated with attenuation of parasite virulence to be included in the development of safe and efficacious live vaccines. For the design of a subunit vaccine parasite molecules will be identified and characterized involved in i) invasion of host cells ii) activation of CD4+ T cells and NK cells for the production of cytokines capable of activating macrophages for killing of the parasites and iii) activation of cytotoxic T-lymphocytes involved in killing of *T. lestoquardi*-infected leucocytes. For improvement of attenuated vaccines, a combination of vaccine with subunit vaccine will be examined for synergistic effects and reducing the need of a cold chain by improving storage conditions/ shelf life of vaccine will be aimed for. Groups working on Plasmodium are involved with the goal to benefit from the scientific and technological knowledge in this field and to translate it into tools and reagents for small ruminant piroplasms. Industrial expertise regarding vaccine development and delivery systems will be incorporated in the whole project. The impact of the vaccine to be produced against these emerging tick-borne diseases will be enormous, as they pose a great threat to livestock production, and a contribution will be made that will meet critical Millennium development goals: food security, food safety, poverty alleviation, animal welfare and environmental sustainability.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,994.00

PROJECT N°

245145

DURATION

48 months

PROJECT START DATE

April 2010

LIST OF PARTNERS

1. FORSCHUNGSZENTRUM BORSTEL (DE)
2. UNIVERSITY OF GLASGOW (UK)
3. LANZHOU VETERINARY RESEARCH INSTITUTE (CN)
4. BERNHARD-NOCHT-INSTITUT FUER TROPENMEDIZIN (DE)
5. INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE (INSERM) (FR)
6. MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT (IL)
7. UNIVERSITAET BERN (CH)
8. THE ROYAL VETERINARY COLLEGE (UK)
9. ADNAN MENDERES UNIVERSITESI (TR)
10. THE UNIVERSITY OF EDINBURGH (UK)
11. PARCO TECNOLOGICO PADANO S.R.L. (IT)
12. INSTITUTO DE BIOLOGIA EXPERIMENTAL E TECNOLOGICA (PT)
13. ECOLE NATIONALE VETERINAIRE, AGROALIMENTAIRE ET DE L'ALIMENTATION NANTES ATLANTIQUE (FR)
14. INSTITUTO NACIONAL DE TECNOLOGIA AGROPECUARIA (AR)
15. INTERVET INTERNATIONAL B.V. (NL)

FP7-KBBE-2009-3

PIROVAC



Tick borne diseases. Improvement of current vaccine and development of new vaccines for theileriosis and babesiosis through exploitation of genomic data – SICA (China and Central Asia)

www.theileria.org/pirovac



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

PORRSCON



New tools and approaches to control Porcine Reproductive and Respiratory Syndrome (PRRS) in the EU and Asia

Porcine reproductive and respiratory syndrome virus (PRRSV) is the major cause of reproductive and respiratory problems in pigs worldwide. Controlling this disease is a top priority in pig producing countries. Due to mutations at a high frequency, new variants of the virus appear that are no longer effectively controlled by the commercial vaccines. In addition, highly virulent variants emerge, leading to high losses. With regard to animal welfare and agricultural economics, there is an urgent need to control PRRS. Furthermore, the abusive use of antibiotics to control PRRSV-associated respiratory problems may lead to resistance that may endanger public health. PoRRSCon is an initiative of 14 partners originating from Europe and Asia with strong expertises in virology and immunology. They are doing frontline research on PRRSV and/or vaccine development. Two of these partners are leading European pharmaceutical companies that will guide the consortium in the direction of exploitable results. By joining their strengths they have an ideal position to be successful in one of the most difficult challenges in pig health, controlling PRRS. To reach this final goal, the following objectives are forwarded: (i) characterize genetically and antigenically current PRRSV isolates in Europe and Asia, (ii) have a better understanding of the complex pathogenesis of PRRSV infections, immune response against PRRSV and immune modulation by PRRSV, (iii) define the genetic base of PRRSV virulence, (iv) identify PRRSV proteins and domains on these viral proteins that are involved in the induction of the immunity against PRRSV and in the immune modulation of PRRSV, (v) develop new generation, efficacious and safe marker vaccines that can be adapted to temporary changes and geographical differences and (vi) develop DIVA assays that allow to differentiate infected from vaccinated animals. At the end, it will be possible to set up a control strategy by combining marker vaccines with DIVA assays.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,070.00

PROJECT N°

245141

DURATION

54 months

PROJECT START DATE

January 2010

LIST OF PARTNERS

1. UNIVERSITEIT GENT (BE)
2. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
3. FUNDACIO CENTRE DE RECERCA EN SANITAT ANIMAL CRESA (ES)
4. INMUNOLOGIA Y GENETICA APLICADA SA (ES)
5. PARCO TECNOLOGICO PADANO S.R.L. (IT)
6. EIDGENOESSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT (CH)
7. DANMARKS TEKNISKE UNIVERSITET (DK)
8. PANSTWOWY INSTYTUT WETERYNARYJNY - PANSTWOWY INSTYTUT BADAWCZY (PL)
9. THE UNIVERSITY OF EDINBURGH (UK)
10. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
11. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
12. SHANGHAI VETERINARY RESEARCH INSTITUTE - CHINESE ACADEMY OF AGRICULTURAL SCIENCES (CN)
13. MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT (VN)
14. BOEHRINGER INGELHEIM VETMEDICA (DE)

FP7-KBBE-2009-3

PORRSCON



Porcine reproductive and respiratory syndrome (PRRS): new generation, efficacious and safe vaccine, new control strategies – SICA (China and South East Asia)

www.porrsccon.ugent.be



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

PROLIFIC



Pluridisciplinary study for a RObust and sustainabLe Improvement of Fertility In Cows

Intensive genetic selection in dairy cattle has resulted in a modern cows with very high milk yield but reduced fertility and poor calving performance. The sustainability of dairy cattle farming systems relies in large part on the ability of cows to maintain reproductive performance as they cope with the constraints imposed by environmental conditions and livestock practices.

The strategic aim of this project is to unlock the potential for proactive herd management by providing the farmer with improved tools for on-farm reproductive monitoring and management. This will be achieved by a pluridisciplinary approach to eliminate the key scientific/methodological blockages and develop innovative solutions for a robust and sustainable improvement of fertility in cows. The project is structured in four R&D workpackages, one demonstration, one outreach and one management WP. The project will: 1) develop models to support on farm decision at different levels: animal fertility, herd management, and socio-economic impact for the farm and the farmer 2) identify genes and pathways involved in the adaptation of the reproductive function to different environmental conditions, especially low input feeding systems 3) identify the functional quantitative trait nucleotides for days till first luteal activity (based on progesterone measures) and estimate genomic breeding values using whole sequence information on individuals 4) study the adaptative response of animals to different feeding systems and management strategies 5) demonstrate the applicability of the knowledge and tools produced in the PROLIFIC project at the farm level 6) disseminate the knowledge produced in the project to the relevant stakeholders. PROLIFIC is a pluridisciplinary project taking advantage of the skills and expertise (modelling, molecular biology, genomics, phenotypic recording and statistics) of partners from all Europe. Seven research organizations, one industry and four SMEs are involved in the project.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,531.00

PROJECT N°

311776

DURATION

48 months

PROJECT START DATE

February 2013

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. AARHUS UNIVERSITET (DK)
3. CONFEDERACION DE ASOCIACIONES DE FRISONA ESPANOLA (ES)
4. INRA TRANSFERT S.A. (FR)
5. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
6. LATTEC IS (DK)
7. SERVICIO REGIONAL DE INVESTIGACION Y DESARROLLO AGROALIMENTARIO DEL PRINCIPADO DE ASTURIAS (ES)
8. SPALLANZANI TECHNOLOGIES SRL (IT)
9. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
10. SKANESSEMIN EK FOR (SE)
11. SVERIGES LANTBRUKSUNIVERSITET (SE)
12. THE SCOTTISH AGRICULTURAL COLLEGE (UK)
13. UNION NATIONALE DES COOPERATIVES AGRICOLES D'ELEVAGE ET D'INSEMINATION ANIMALE (FR)

FP7-KBBE-2012-6-singlestage

PROLIFIC



Optimised terrestrial farm animal reproduction
systems and/or technologies

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

RAPIDIA-FIELD



Rapid Field Diagnostics and Screening in Veterinary Medicine

Sustainable food production capable of feeding a growing global population is a significant challenge that is faced by agricultural industries throughout the world. The demand for safe, efficient and high quality animal protein will rise significantly over the next decade with a concomitant increase in the world population of domesticated livestock. Infectious diseases continue to impact upon the productivity of farm animals and threats of disease incursions are further increased by the globalised trade of animals and animal products. Rapid and reliable diagnostic systems can play an integral role in the detection, monitoring, control and subsequent eradication of animal diseases and pathologies.

This proposal will develop and bring to market new tools to achieve effective diagnosis of livestock, companion animal and wildlife diseases. The project RAPIDIA-FIELD will develop multiplex pen-side tests that can be used to support local decision-making by animal health practitioners. These tests will be simple to perform, robust, inexpensive and also provide unambiguous results for easy reporting. This concept also includes work to develop test formats for use in non-specialised front-line laboratories.

In addition to the development of the specific tests and assay platforms, the project will also consider how these tests will be used in the field or in local laboratories, and how data generated by the assays will integrate with other new (and existing) systems that contribute to the diagnosis, monitoring, control and subsequent eradication of animal diseases. Aspects of this work will include real-time monitoring on line of animal health on farms to collect parameters such as feed consumption and water intake as well as using thermography or thermal chip to look for early signs of clinical disease. Together with the data generated by the assays, reporting protocols will also be established to ensure that the critical information collected is correctly archived and is traceable to international quality standards.

The project will also pay some attention to new technologies and protocols only carried out in sophisticated laboratories. The idea of this work is to position animal health in a new frontier of science that will maximise our chance to identify new diseases and problems before they become overt health threats.

Concluding, the proposed strategy is devoted to define, develop and bring to the society products and services that contribute to Animal Health control at field level.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,998,669.00

PROJECT N°

289364

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. INMUNOLOGIA Y GENETICA APLICADA SA (ES)
2. FRIEDRICH LOEFFLER INSTITUT - BUNDESFORSCHUNGSINSTITUT FUER TIERGESUNDHEIT (DE)
3. PRIONICS AG (CH)
4. PROPHYL ALLATEGESZSEGUGYI DIAGNOSZTIKAI KUTATO ES SZOLGALTATO KFT (HU)
5. INSTITUTO NACIONAL DE TECNICA AEROSPACIAL (ES)
6. THE INSTITUTE FOR ANIMAL HEALTH (UK)
7. AGENCE NATIONALE DE SECURITE SANITAIRE DE L'ALIMENTATION, DE L'ENVIRONNEMENT ET DU TRAVAIL (FR)
8. UNIVERSIDAD COMPLUTENSE DE MADRID (ES)
9. CENTRUM VOOR ONDERZOEK IN DIERGENEESKUNDE EN AGROCHEMIE - CODA (BE)
10. STATENS VETERINAERMEDICINSKA ANSTALT (SE)
11. IDEXX SWITZERLAND AG (CH)
12. ENIGMA DIAGNOSTICS LIMITED (UK)

FP7-KBBE-2011-5

RAPIDIA-FIELD

Development of field tests for rapid screening of pathologies as well as simple laboratories tests in animals

<http://rapidia.eu/>



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

RISKSUR



Providing a new generation of methodologies and tools for cost-effective risk-based animal health surveillance systems for the benefit of livestock producers, decision makers and consumers

The risk of occurrence of exotic, new (emerging), re-emerging as well as endemic diseases has increased substantially, particularly due to globalisation and intensification of animal production. While the need for effective animal health surveillance is widely recognised for the management of such threats, the currently used systems do not take optimal advantage of recent advances in epidemiological approaches, and investment is being constrained due to significant financial budget reductions in most countries. The overall aim of RISKSUR is to develop decision support tools for the design of cost-effective risk-based surveillance systems that integrate the most recent advances in epidemiological methodologies. This will be achieved by the development of evaluation frameworks for animal health surveillance system designs for three different surveillance objectives: 1) Early detection of animal disease, 2) Demonstration of freedom from animal disease, and 3) Determination of disease frequency and detection of cases of endemic animal disease. Methods and tools for comparative epidemiological and economic evaluation of different surveillance system designs will be developed, and made available through a web-based decision support tool. The project will provide decision makers with such a validated tool tailored to their needs that allows the design of more cost-effective animal health surveillance and thereby reduces direct and indirect impact of animal disease on European citizens. Our partners represent a unique combination of internationally recognised expertise in animal disease surveillance methodologies and economic evaluation as well as applied experience in delivery of surveillance programmes in a variety of socio-economic contexts from a national and global perspective. The practical implementation of the (IT) tools and the transfer of the knowledge through training and others are led by four SMEs with a strong track record in translation of research results.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,998,854.00

PROJECT N°

310806

DURATION

36 months

PROJECT START DATE

November 2012

LIST OF PARTNERS

1. THE ROYAL VETERINARY COLLEGE (UK)
2. ACCELPMENT AG (CH)
3. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
4. ARCADIA INTERNATIONAL (BE)
5. CENTRE DE COOPERATION INTERNATIONALE EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
6. FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS FAO (IT)
7. FRIEDRICH LOEFFLER INSTITUT - BUNDESFORSCHUNGSINSTITUT FUER TIERGESUNDHEIT (DE)
8. GEZONDHEIDSDIENST VOOR DIEREN BV (NL)
9. SAFOSO AG(SAFE FOOD SOLUTIONS) (CH)
10. STATENS VETERINAERMEDICINSKA ANSTALT (SE)
11. TRACETRACKER AS (NO)
12. UNIVERSIDAD COMPLUTENSE DE MADRID (ES)

FP7-KBBE-2012-6-singlestage

RISKSUR

Development and evaluation of scientific methodologies for cost-effective risk-based animal health surveillance

www.fp7-risksur.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

ROBUSTMILK



Innovative and Practical Breeding Tools for Improved Dairy Products from More Robust Dairy Cattle

The objective of ROBUSTMILK is to develop new practical technologies to allow breeders to re-focus their selection to include milk quality and dairy cow robustness and to evaluate the consequences of selection for these traits taking cognisance of various milk production systems. Six research organisations, all with a strong network in the animal breeding industry, have agreed to share knowledge and resources to develop a strong research program to achieve this objective. Each partner has its own specialised expertise (phenotypic recording, statistics, genomics) and unique data available, in the form of milk quality and dairy cattle robustness. The overall objective is achieved by five integrated workpackages, each having their own objective: 1) Creation of a common data-base that includes unique and scarcely recorded phenotypic measurements for traits underlying robustness and milk quality; 2) to develop phenotypic measurement tools for robustness (energy balance) and milk quality (lactoferrin and fatty acid composition) using mid-infrared spectrometry; 3) to develop statistical tools to select for robustness and milk quality (udder health and SCC) taking into account complex biological backgrounds; 4) to develop genomic tools for selection for robustness and milk quality traits; and 5) integrating and disseminating knowledge on the consequences of selection practises on robustness and milk quality. ROBUSTMILK has the potential to enhance the competitiveness of European agriculture through the production of higher quality dairy products and more sustainable dairy production systems. ROBUSTMILK will contribute significantly towards the Knowledge Based Bio Economy objective of the EU, through a greater understanding of factors contributing to genetic variation and exploiting this variation in a sustainable manner in genetic improvement programmes. The objectives are in line with the vision of the Farm Animal Breeding and Reproduction Technology Platform.

PROJECT COORDINATOR

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LANDBOUWKUNDIG ONDERZOEK
(NL)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,970,036.00

PROJECT N°

211708

DURATION

48 months

PROJECT START DATE

April 2008

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
3. FACULTE UNIVERSITAIRE DES SCIENCES AGRONOMIQUES DE GEMBLoux (BE)
4. SVERIGES LANTBRUKSUNIVERSITET (SE)
5. WAGENINGEN UNIVERSITEIT (NL)
6. THE SCOTTISH AGRICULTURAL COLLEGE (UK)

FP7-KBBE-2007-1

Breeding tools for improved livestock products

ROBUSTMILK

www.robustmilk.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

STAR-IDAZ



Global Strategic Alliances for the Coordination of Research on the Major Infectious Diseases of Animals and Zoonoses

Animal diseases can cause serious social, economic and environmental damage and in some cases also threaten human health. An increasing number of the major disease problems or threats faced by the livestock industry and zoonoses are of a global nature. The overall aim of the global strategic alliances for the coordination of research on the major infectious diseases of animals is to improve coordination of research activities on the major infectious diseases of livestock and zoonoses so as to hasten the delivery of improved control methods. This will be achieved through the establishment of an international forum of R&D programme owners/managers and international organisations for the purpose of sharing information, improving collaboration on research activities and working towards common research agendas and coordinated research funding on the major animal diseases affecting livestock production and/or human health. It will build on the groundwork established by the SCAR collaborative working group on animal health and welfare research, the EMIDA ERA-NET project and specific INCO-NETs involving partner countries. The scope of the project will include co-ordination of research relevant to emerging and major infectious diseases of livestock, including fish and managed bees, and those infections of livestock that may carry the risk of disease threat to human health. Diseases of wildlife will also be considered where they are identified as reservoirs of infection with emerging and major infectious diseases of humans or production animals.

These objectives will be delivered through the following five workpackages: WP1. Project coordination, management, communication and dissemination; WP2. Sharing information on existing research programmes; WP3. Analysis of and responding to global, regional and industry sector priorities; WP4. Networking of ongoing research activities on major issues and WP5. Developing a strategic trans-national animal health research agendas.

Promoting coordination and cooperation at
international level of research programmes in
the area of animal health, in particular infectious
diseases including zoonoses - Mandatory ICPC
(Latin America and Asia)

FP7-KBBE-2010-4

STAR-IDAZ

www.star-idaz.net



PROJECT COORDINATOR

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FUNDING SCHEME CSA

EC CONTRIBUTION € 999,130.00

PROJECT N° 265919

DURATION 48 months

PROJECT START DATE

February 2011

LIST OF PARTNERS

1. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
2. CHINESE ACADEMY OF AGRICULTURAL SCIENCES (CN)
3. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
4. EMPRESA BRASILEIRA DE PESQUISA AGROPECUARIA (BR)
5. FOUNDATION FOR RESEARCH SCIENCE AND TECHNOLOGY (NZ)
6. MINISTERIO DE CIENCIA, TECNOLOGÍA E INNOVACIÓN PRODUCTIVA (AR)
7. UNITED STATES DEPARTMENT OF AGRICULTURE (US)
8. CONSEJO TECNICO CONSULTIVO NACIONAL DE SANIDAD ANIMAL (MX)
9. MINISTRY OF FOOD, AGRICULTURE AND FISHERIES, DANISH FOOD INDUSTRY AGENCY (DK)
10. FORSCHUNGSZENTRUM JUELICH GMBH (DE)
11. CANADIAN FOOD INSPECTION AGENCY (CA)
12. FEDERAL STATE EDUCATIONAL INSTITUTION OF HIGHER PROFESSIONAL EDUCATION MOSCOW STATE ACADEMY OF VETERINARY MEDICINE AND BIOTECHNOLOGIES NAMED AFTER K.I. SKRYABIN (RU)
13. INTERNATIONAL CENTRE FOR INNOVATIONS IN SCIENCE, TECHNOLOGY AND EDUCATION (RU)
14. MINISTERIE VAN ECONOMISCHE ZAKEN, LANDBOUW EN INNOVATIE (NL)
15. MINISTERO DELLA SALUTE (IT)
16. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
17. PFIZER INTERNATIONAL OPERATIONS (FR)
18. DEPARTMENT OF AGRICULTURE, FISHERIES AND FORESTRY (AU)
19. MINISTRY OF SCIENCE AND TECHNOLOGY (IN)
20. MERIAL SAS (FR)
21. BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL (UK)
22. INTERNATIONAL FEDERATION FOR ANIMAL HEALTH (BE)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

TB-STEP



Strategies for the eradication of bovine tuberculosis

Tuberculosis is an infectious disease caused by the Mycobacterium tuberculosis complex. This infection affects domestic and wild animals and represents a major concern worldwide because of its high economic impact due to mortalities, condemnations, decreases in productions, and its zoonotic potential.

Eradication programmes based on a test-and-slaughter policy in the EU have proved successful in some countries, however, have been unable to eradicate the infection in others despite the use of vast economical resources. A relevant problem is the existence of infected wildlife; the best known examples are the European badger (*Meles meles*) in UK and the Republic of Ireland, and the wild boar (*Sus scrofa*) in Spain. Besides this fact, there is only a limited knowledge about other potential underlying causes, such as (1) the real contribution of cattle-to-cattle transmission at the same area (neighbouring farms and communal pastures) or after movement of animals; (2) the role played in the epidemiology by other domestic animals, or (3) the effect of interferences in the diagnosis tests. The weight of these causes may also differ depending on the farming system and ecological factors.

Likely there is not a single solution as likely there is not a single cause. To approach the eradication of this infection, this TB-STEP project plans a multifaceted battlefront. The consortium is made up of 12 partners from eight countries which will research on eight work-packages devoted to improved tools and to develop strategies for the eradication of bovine tuberculosis in areas where the disease is present in both domestic and wildlife populations. It will include: (1) vaccination of bovine animals and wildlife, (2) control of populations to reach numbers compatible with animal welfare and strategies to limit the contact between domestic and wild species, and (3) the development of improved diagnostic tools for detection of infected animals.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,894,759.00

PROJECT N°

212414

DURATION

45 months

PROJECT START DATE

October 2008

LIST OF PARTNERS

1. UNIVERSIDAD COMPLUTENSE DE MADRID (ES)
2. UNIVERSIDAD DE CASTILLA - LA MANCHA (ES)
3. UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN (IE)
4. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
5. THE SCOTTISH AGRICULTURAL COLLEGE (UK)
6. THE QUEEN'S UNIVERSITY OF BELFAST (UK)
7. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
8. ISTITUTO SUPERIORE DI SANITA (IT)
9. MEZOGAZDASAGI SZAKIGAZGATASI HIVATAL KOZPONT (HU)
10. IMMUNOLOGIA Y GENETICA APLICADA SA (ES)
11. PRIONICS AG (CH)
12. UNIVERSITY OF PRETORIA (ZA)

FP7-KBBE-2007-1

TB-STEP



Development of rational strategies for the
eradication of bovine tuberculosis

www.vigilanciasanitaria.es/tb-step



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-3 Optimised animal health production and welfare
across agriculture

WELFARE INDICATORS



Development, integration and dissemination of animal-based welfare indicators, including pain, in commercially important husbandry species, with special emphasis on small ruminants, equidae & turkeys

Animal welfare is one of the topics that has consistently ranked on the top of items brought to the attention of governmental organizations and politicians across European countries. Concerns about animal welfare among European citizens are founded in well thought expectations from governments, industry and other stakeholders. The tremendous public scrutiny on animal welfare related issues put excessive pressure on lawmakers who are expected to offer rapid and effective solutions to perceived animal welfare problems. The need for rapid responses to address animal welfare issues has, oftentimes, pressured animal welfare scientists to develop suboptimal criteria to assess animal welfare and created a gap between fundamental scientific questions in this new scientific discipline and the applied aspects needed to attend the immediate public concerns. In this proposal our goal is to rescue the balance on the need for a science based approach to investigate animal welfare questions. We will develop and test animal based welfare, including pain, indicators in sheep, goats, horses, donkeys and turkeys. In addition we will engage veterinarians to study the relationship between diseases and animal welfare. We will also address more fundamental questions measuring husbandry factors that may affect pre-natal programming of adaptive strategies that may compromise the validity and reliability of welfare indicators. Finally we will integrate research, teaching and outreach activities through the Global Research and Teaching School in Animal Welfare Science in order to promote sustainability fostering long-term competitiveness in the European animal industry through a transparent and inclusive relationship among stakeholders.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

4,497,894.00

PROJECT N°

266213

DURATION

48 months

PROJECT START DATE

May 2011

LIST OF PARTNERS

1. THE SCOTTISH AGRICULTURAL COLLEGE (UK)
2. UNIVERSITETET FOR MILJO OG BIOVITENSKAP (NO)
3. UNIVERSITA DEGLI STUDI DI MILANO (IT)
4. NEIKER-INSTITUTO VASCO DE INVESTIGACION Y DESARROLLO AGRARIO SA (ES)
5. CENTRO DE ESTUDOS SUPERIORES POSITIVO LTDA (BR)
6. FACULDADE DE MEDICINA VETERINARIA-UNIVERSIDADE TECNICA DE LISBOA (PT)
7. THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE (UK)
8. THE TRUSTEES OF INDIANA UNIVERSITY (US)
9. VYZKUMNY USTAV ZIVOCISNE VYROBY V.V.I. UHRINEVES (CZ)
10. TIERARZTLICHE KLINIK FUR PFERDE (DE)

FP7-KBBE-2010-4

WELFARE INDICATORS

Development and integration of animal based
welfare indicators in livestock species

www.animal-welfare-indicators.net



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

ADVANZ



ADVANZ - Advocacy for the fight against Neglected Zoonotic Diseases

The aim of ADVANZ (Advocacy for Neglected Zoonotic Diseases) is to persuade decision makers and empower stakeholders at local, regional, and international levels towards a coordinated fight against neglected zoonotic diseases (NZD), first and foremost in Africa, where the burden from NZD are heaviest. If the battle against NZD is going to be won, a major part of the initiative must come through a behaviour change in the population at risk. A major challenge is that NZD to a large extent are 'silent' for the humans living in communities in endemic areas. Therefore locally adapted information is required to generate awareness and alter bad practices. At the same time, the change must be approached via an informed support mechanism, veterinarian, public health and agricultural extension workers being aware of the variety of NZD and the different approaches to combat them. ADVANZ will provide evidence-based knowledge of the cost-effectiveness of controlling these diseases in a manner that can be appreciated. We will implement a new model, based on the One Health approach, which targets decision making bodies involved in disease control: relevant Ministries, district health- veterinary and vector control offices and the locally affected communities. A new Pan-African OH NZD network will be created, harnessing strengths from existing disease specific networks and providing a platform for intersectoral collaboration. An advisory board will guide ADVANZ in design and targeting of NZD information materials. Board members will be experts, primarily from Africa drawn from a range of disciplines including of anthropology, health, agriculture, economics, traditional knowledge and environmental sciences. Strategic partners from relevant EU projects, and representatives from WHO and FAO will be additional board members. An international conference, organized jointly with WHO, FAO and OIE (NZ4) will showcase successful NZ approaches and the ADVANZ model.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

499,958.00

PROJECT N°

312030

DURATION

30 months

PROJECT START DATE

October 2012

LIST OF PARTNERS

1. KØBENHAVNS UNIVERSITET (DK)
2. UNIVERSITY OF KWAZULU-NATAL (ZA)
3. AVIA-GIS BVBA (BE)
4. THE UNIVERSITY OF EDINBURGH (UK)
5. PRINS LEOPOLD INSTITUUT VOOR TROPISCHE GENEESKUNDE (BE)
6. SCHWEIZERISCHES TROPEN- UND PUBLIC HEALTH-INSTITUT (CH)

FP7-KBBE-2012-6-singlestage

ADVANZ



Advocacy and informational material for different media targeting decision makers at different levels and end-users in Africa in the fight against neglected zoonotic diseases

www.advanz.org



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

AGFOODTRADE



New issues in agricultural, food and bioenergy trade

International trade reflects complex dynamic processes driven by demographic, socio-economic, technological and political changes. Therefore, future evolution of world markets is highly uncertain. The project builds on past research but emphasizes issues usually overlooked by standard assessments of trade liberalization such as: • the impact of demand from energy markets which could affect agriculture and reverse the decline of real farm product prices; • the demographic changes, which in some developing and transition countries modify the demand for food, especially that for industrial food processing; • the concentration of firms in many global markets, which could modify the expected size and distribution of gains from trade liberalization among stakeholders; • the impact of trade liberalization on price volatility, which is a key concern but remains to be thoroughly evaluated; • the growing importance of sanitary and technical measures and their potential impact on food security, health issues, and trade.

AGFOODTRADE helps answer the following questions: what are major trends and driving forces affecting world trade? What is their impact and how should trade policies deal with these processes in the future? A set of scenarios will be: a) assessed by analysing trends of a selection of indicators; b) quantified by a large scale dynamic general equilibrium model, a spatial trade model and a model of the EU farm sector; and c) tested in five case study countries. The project will provide information, expertise, and operational instruments to policymakers involved in trade negotiations, and agricultural policy design. Project outcomes – databases and trade methodologies – will have a strong foundation in policy realities thanks to the involvement of stakeholders. The quantitative instruments will ensure a forward-looking assessment of future agreements, including their effects on EU27 trade and the CAP, and answer the Commission's need for quantitative simulations.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,866,478.00

PROJECT N°

212036

DURATION

41 months

PROJECT START DATE

May 2008

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. KØBENHAVNS UNIVERSITET (DK)
3. UNIVERSITA DEGLI STUDI DEL MOLISE (IT)
4. THE PROVOST FELLOWS & SCHOLARS OF THE COLLEGE OF THE HOLY AND UNDIVIDED TRINITY OF QUEEN ELIZABETH NEAR DUBLIN (IE)
5. INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE - IFPRI (US)
6. WYŻSZA SZKOŁA EKONOMICZNA W BIAŁYMSTOKU (PL)
7. INSTITUT SENEGALAIS DE RECHERCHES AGRICOLES (SN)
8. COMMISSION OF THE EUROPEAN COMMUNITIES - DIRECTORATE GENERAL JOINT RESEARCH CENTRE - JRC (BE)
9. CENTRE D'INFORMATION ET DE RECHERCHE SUR L'ECONOMIE MONDIALE (FR)
10. SLOVENSKA POLNOHOSPODARSKA UNIVERSITA V NITRE (SLOVAK AGRICULTURAL UNIVERSITY IN NITRA) (SK)
11. VITAMIB SAS (FR)
12. UNIVERSITA DELLA CALABRIA (IT)
13. CENTRE D'ETUDES PROSPECTIVES ET D'INFORMATIONS INTERNATIONALES (FR)

FP7-KBBE-2007-1

AGFOODTRADE



Drivers and limits of enhanced trade in
agricultural and food products

<http://agfoodtrade.vitamib.com/>



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

AGRIPOLICY



Enlargement Network for Agripolicy Analysis

AgriPolicy builds on the results of the previous FP6 project "CEEC AGRI POLICY" (www.agripolicy.net) which was awarded financial support by DG Research in 2004 following the call FP6-2003-SSP-3. The overall objective of the proposal is to support the formulation of Community agricultural policies.

AgriPolicy has 4 specific objectives:

1. Networking and information sharing

The objective is to stimulate the networking and the sharing of information between organisations involved in agri-economics analysis. The networking will be stimulated through the organisation of 3 symposia and 6 workshops and the development of a dynamic web site including an up-dated directories of experts and organisations.

2. Provide scientific input for policy making

The objective is to provide analyses on a number of specific topics (8-monthly as well as "report on demand").

3. Prepare future analysis

The objective is to prepare for future policy and sectoral analyses and research by collecting quantitative and qualitative information. In the NMS, 3 monitoring reports of agricultural and rural will be prepared. In the WBC, a study on the existing availability of key agricultural and rural statistics will be prepared.

4. Develop analytical capacities

The objective is to strengthen the analytical capabilities of the research organisations involved in the project in the field of policy evaluation and foresight analysis. This will be achieved by implementing training sessions as well as conducting pilot studies.

AgriPolicy will be implemented by a team of experts from 24 organisations from 24 countries. The team is composed of the partners of the former project, augmented with new competencies from the "old Member States" (IAMO in Germany and LEI in the Netherlands), from Malta and from Albania, FYROM, Kosovo and Montenegro.

FP7-KBBE-2007-1

AGRIPOLICY



Enlargement network - agro-economic policy
analysis of the accession and the candidate
states and the Western Balkan countries

www.agripolicy.net



PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

998,219.00

PROJECT N°

211760

DURATION

24 months

PROJECT START DATE

June 2008

LIST OF PARTNERS

1. EUROQUALITY SARL (FR)
2. THE UNIVERSITY OF EXETER (UK)
3. LEIBNIZ INSTITUT FUER AGRARENTWICKUNG IN MITTEL- UND OSTEUROPA (DE)
4. UNIVERSITY OF PLOVDIV (BG)
5. USTAV ZEMEDELSKE EKONOMIKY A INFORMACI (CZ)
6. EESTI MAULIKOOL (EE)
7. BUDAPESTI CORVINUS EGYETEM (HU)
8. LATVIAN STATE INSTITUTE OF AGRARIAN ECONOMICS (LV)
9. LIETUVOS AGRARINES EKONOMIKOS INSTITUTAS (LT)
10. INSTITUT EKONOMIKI ROLINCTWA I GOSPODARKI ZYWNOSCIOWEJ (PL)
11. UNIVERSITATEA BABES BOLYAI (RO)
12. KMETIJSKI INSTITUT SLOVENIJE - AGRICULTURAL INSTITUTE OF SLOVENIA (SI)
13. UNIVERSITY OF CUKUROVA (TR)
14. FACULTY OF AGRICULTURE AND FOOD SCIENCE SARAJEVO (BA)
15. SVEUCILISTE U ZAGREBU AGRONOMSKI FAKULTET (HR)
16. FACULTY OF AGRICULTURE - UNIVERSITY OF BELGRADE (RS)
17. COSTAS PETRIDES AND ASSOCIATES LIMITED (CY)
18. VYSKUMNY USTAV EKONOMIKY POLNOHOSPODARSTVA A POTRAVINARSTVA (SK)
19. UNIVERZA V LJUBLJANI (SI)
20. SS. CYRIL AND METHODIUS UNIVERSITY IN SKOPJE (MK)
21. JAVNA USTANOVA UNIVERZITET CRNE GORE PODGORICA (ME)
22. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

AGRIXCHANGE



A common data exchange system for agricultural systems

Within the knowledge-based bio-economy, information sharing is an important issue. In agri-food business, this is a complex issue because many aspects and dimensions play a role. An installed base of information systems lack standardization, which hampers efficient exchange of information. This leads to inefficient business processes and hampers adoption of new knowledge and technology. Especially, the exchange of information at whole chain or network level is poorly organized. Although arable and livestock farming have their own specific needs, there are many similarities in the need for an integrated approach. Spatial data increasingly plays an important role in agriculture.

The overall objective of this project is to coordinate and support the setting up of sustainable network for developing a system for common data exchange in agriculture. This will be achieved by:

- establishing a platform on data exchange in agriculture in the EU;
- developing a reference framework for interoperability of data exchange;
- identifying the main challenges for harmonizing data exchange.

First, an in-depth analysis and investigation of the state-of-the art in EU member states will be carried out. A platform is built up that facilitates communication and collaborative working groups, that work on several, representative use cases, guided by an integrative reference framework. The framework consists of a sound architecture and infrastructure based on a business process modeling approach integrating existing standards and services. The development is done in close interaction with relevant stakeholders through the platform and international workshops. The results converge into a strategic research agenda that contains a roadmap for future developments.

The project consortium consists of 14 partners from 11 countries covering different disciplines, stakeholder views and experiences with information management and standardization.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,380.00

PROJECT N°

244957

DURATION

36 months

PROJECT START DATE

December 2009

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. KURATORIUM FUER TECHNIK UND BAUWESEN IN DER LANDWIRTSCHAFT E.V. (DE)
3. MAA JA ELINTARVIKETA LOUDEN TUTKIMUSKESKUS (FI)
4. WIRELESSINFO (CZ)
5. INSTITUT DE L'ELEVAGE (FR)
6. INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES. (ES)
7. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
8. UNIVERSITAET ROSTOCK (DE)
9. FORSCHUNGSINSTITUT FUR BIOLOGISCHENLANDBAU STIFTUNG (CH)
10. ALTAVIA SRL (IT)
11. UNIWERSYTET PRZYRODNICZY W POZNANIU* (PL)
12. ACTA INFORMATIQUE (FR)
13. PROGIS SOFTWARE GMBH (AT)

FP7-KBBE-2009-3

AGRIXCHANGE

A common data exchange system for
agricultural systems

www.agriXchange.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

ALL-SMART-PIGS



Practical implementation of precision livestock technologies and services at European pig farms using the living lab methodology

There are two main objectives with A Living Lab for Smart Pig farming (ALL-SMART-PIGS), where in total 4 farms will participate (2 in Hungary and 2 in Spain):

1. To demonstrate the technical and economic viability of precision livestock farming technologies in European pig farming.
2. To establish of Living Lab infrastructure for bringing innovative Precision Livestock Farming (PLF) technologies to European livestock farmers.

The main outcome of will be proven PLF applications ready for commercialisation among European pig farmers; provided by innovative SMEs which in ALL-SMART-PIGS have tested and validated their technological prototypes and services in real life conditions together with pig farmers and other food business operators.

The project initiators have identified health, growth rate and feed usage as key parameters to monitor at this stage (note that the latter two allow to determine the feed conversion rate). The SME technology partners in ALL-SMART-PIGS will employ PLF technologies to monitor the indicators related to these parameters:

A consortium of 3 high-tech SMEs, an established provider to the European farming community, regional R&D partners and an experienced SME and Living Lab facilitator have the potential to generate great synergy and meet the project' goal of demonstrating the economic benefits and technical viability of PLF, develop a business model for future SMART Pig Applications and showcase that the Living Lab methodology can pave the way for innovative technologies to the market.

The lead user of the result will be the SME technology providers involved, the pig farmers (which all are SMEs) and other food business operators related to the pig farming value chain. In the long term the lead users are also European research & development institutions and enterprises dealing with the challenge to bring innovation to the market. The results of the project will be disseminated among authorities, stakeholders and industries.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

767,073.75

PROJECT N°

311989

DURATION

24 months

PROJECT START DATE

November 2012

LIST OF PARTNERS

1. SP/F SYNTESA (FO)
2. SOUNDTALKS NV (BE)
3. PLF AGRITECH EUROPE LTD (UK)
4. INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES. (ES)
5. SZENT ISTVAN EGYETEM (HU)
6. FANCOM B.V. (NL)
7. NEMA PF (FO)

FP7-KBBE-2012-6-singlestage

ALL-SMART-PIGS

Boosting the translation of FP projects' results into innovative applications in the field of agriculture, forestry, fisheries and aquaculture

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

BECOTEPS

The Bio-Economy Technology Platforms join forces to address synergies and gaps between their Strategic Research Agendas

The nine European Technology Platforms (ETPs) that focus on the Knowledge-Based Bio-Economy (KBBE) join forces in this support action 'BECOTEPS'.

The main objectives and the respective activities will be:

- 1) Achieve closer and more coordinated collaboration between the KBBE ETPs.
- 2) Develop recommendations for better interaction between KBBE ETP stakeholders along the product chains and the sustainability issue regarding multidisciplinary research, application and policy issues.

BECOTEPS will help to link science and application by addressing synergies and gaps

i) between the SRAs of the ETPs and ii) with respect to the research preparedness of the scientific community by topical workshops on cross-cutting KBBE issues.

The first workshop will address trust and collaboration in the food and feed chain, the second the integration of the non-food chains, and the third cross-cutting sustainability issues. The workshop recommendations on research and policy will be summarized in a White Paper.

- 3) Encourage discussions among public research initiatives - European and national - and between the public and the private research initiatives to foster implementation of the Strategic Research Agendas based on the recommendations developed between the ETPs. In addition, BECOTEPS will promote the KBBE concept with the European Commission, European Parliament and national ministries in the member states including the relevant ERA-Networks.

A small number of dissemination events will be held to discuss the KBBE, recommendations from the workshops on implementing cross-cutting issues from the ETPs' Strategic Research Agendas (including Lead Markets, SMEs, education and training), and future collaboration.

FP7-KBBE-2008-2B

BECOTEPS



Coordinating the activities of KBBE
relevant European Technology Platforms

www.becoteeps.org



PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

699,989.00

PROJECT N°

226526

DURATION

25 months

PROJECT START DATE

March 2009

LIST OF PARTNERS

1. EUROPESE ORGANISATIE VOOR WETENSCHAPPELIJK PLANTENONDERZOEK E.P.S.O. IVZW (BE)
2. UNIVERSITY OF NEWCASTLE UPON TYNE (UK)
3. EUROPABIO - THE EUROPEAN ASSOCIATION OF BIOINDUSTRIES (BE)
4. EUROPEAN FORUM OF FARM ANIMAL BREEDERS (NL)
5. EUROPEAN FOREST INSTITUTE (FI)
6. FACHAGENTUR NACHWACHSENDE ROHSTOFFE E.V. (DE)
7. TECHNISCHE UNIVERSITAET DRESDEN (DE)
8. FÉDÉRATION EUROPÉENNE DES PRODUCTEURS AQUACOLES (FR)
9. EUROPEAN CONFEDERATION OF WOODWORKING INDUSTRIES AISBL (BE)
10. PAPIERTECHNISCHE STIFTUNG (DE)
11. FOREST-BASED SECTOR TECHNOLOGY PLATFORM (BE)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

BRIO



Banking Rhizosphere Micro-Organisms. European - Russian initiative to set up a network of rhizosphere microbiological resources centres

Soil microbes play key roles in ecosystems and influence ecosystem processes, including nutrient acquisition, nitrogen cycling, carbon cycling, and soil formation. Soil microbes are the majority in soil and a large portion of the genetic diversity on Earth. Many microbes live in association with plant roots and can promote plant productivity and provide protection against stress and disease. Other microbes acts as pathogens and reduce plant growth. Sound environmental and agricultural practices favour balanced composition of biotic agents population in the rhizosphere. Well balanced micro-organisms population favours colonization of soil and nutrients intake, limits occurrence of pathogens (biotic stress), supports the development of commensal or symbiotic relationship between plant and micro-organisms, with a good tempering effect regarding abiotic stress (good water retention capacity, available macro- and micronutrients). Cultivated soils have been extensively studied. Pristine rhizospheres are less studied although these ecological niches contain important micro-flora and -fauna or help conceive the complex ecological microbes-plant relationship in soil, in the rhizosphere. The purposes of this project are:

- to organize cooperation between specialised collections containing microbes isolated from the rhizosphere,
- to constitute a common wide-range pool of micro-biodiversity exploitable for research and industry: the Pan-European Rhizosphere resources network (PERN).

Collaboration between culture collections having material from West-European ecosystems and Russian Biological Resources Centres having micro-organisms from East-European biotopes will create a coordinated network of combined human expertise and culture collections. The network will offer scientists facilitated access to a wide range of micro-organisms coming from a broad spectrum of ecological zones spread over an extensive geographical range to study and exploit.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

499,690.00

PROJECT N°

266106

DURATION

36 months

PROJECT START DATE

May 2011

LIST OF PARTNERS

1. SERVICE PUBLIC FEDERAL DE PROGRAMMATION POLITIQUE SCIENTIFIQUE (BE)
2. UNIVERSITE CATHOLIQUE DE LOUVAIN (BE)
3. UNIVERSITEIT GENT (BE)
4. EIDGENOESSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT (CH)
5. UNIVERSITA DEGLI STUDI DI TORINO (IT)
6. INSTITUT OF THE RUSSIAN ACADEMY OF SCIENCES SKRYABIN INSTITUTE OF BIOCHEMISTRY AND PHYSIOLOGY OF MICROORGANISMS RAS (RU)
7. INSTITUTE OF ECOLOGY AND GENETICS OF MICROORGANISMS THE URAL BRANCH OF THE RUSSIAN ACADEMY OF SCIENCES (RU)
8. RUSSIAN ACADEMY OF SCIENCES INSTITUTION INSTITUTE OF BIOCHEMISTRY ANDPHYSIOLOGY OF PLANTS AND MICROORGANISMS (RU)

FP7-KBBE-2010-4

BRIO



EU-Russia Partnership initiative in Microbes -
Plants Biodiversities – Mandatory Russia

www.BRIONET.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

CANTOGETHER



Crops and Animals TOGETHER

Agricultural production faces numerous challenges regarding competitiveness, conserving natural and non-renewable resources (water, soil, air, phosphorus, fossil fuels) and ecosystem services (pollination, natural pest control, soil fertility). Society also expects from agriculture to be more environment-friendly in several issues such as climatic change, declining biodiversity, fossil energy depletion, and water shortage.

To overcome these limitations, CANTOGETHER will design innovative sustainable mixed farming systems (MFS). A design-assessment-adjustment iterative cycle will be adopted to ensure continuous validation and improvement of the innovative investigated MFS through a participative approach involving stakeholders and researchers across Europe. It will bring together a European network of 24 existing experimental and commercial farms covering a wide diversity of natural and socio-economic conditions in which the most promising MFS will be implemented in order to verify their practicability and to perform an in-depth integrated assessment (economic and environmental).

The MFS will be designed for individual farm level or collective implementation at the territorial level. At the same time, CANTOGETHER will define recommendations for a common agricultural policy promoting the development of these MFS.

The innovative analysed MFS will be based on the simultaneous utilization of crops (cash, feed and energetic) and various rearing animals with full recycling practices of animal wastes in view to ensure high resource-use efficiency (notably of nutrients), reduction in dependence on external inputs (fertilisers, pesticides, concentrated feeds), and acceptable environmental and economic performances.

CANTOGETHER will produce a complete picture of their effects and will facilitate their adoption by jointly involving researchers and the key actors of the agricultural sector (farmers, advisors, policy makers, and actors of the food supply chain).

FP7-KBBE-2011-5

CANTOGETHER



Towards land management of tomorrow -
Innovative forms of mixed farming for optimized
use of energy and nutrients

www.fp7cantogether.eu



PROJECT COORDINATOR

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FUNDING SCHEME CP

EC CONTRIBUTION € 2,995,768.00

PROJECT N° 289328

DURATION 48 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
3. EIDGENÖSSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT (CH)
4. ABERYSTWYTH UNIVERSITY (UK)
5. SIK - INSTITUTET FOER LIVSMEDEL OCH BIOTEKNIK AB (SE)
6. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
7. ROTHAMSTED RESEARCH LIMITED (UK)
8. CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL (DE)
9. INSTYTUT UPRAWY NAWOZENIA I GLEBOZNAWSTWA, PANSTWOWY INSTYTUT BADAWCZY (PL)
10. UNIVERSIDAD DE ZARAGOZA (ES)
11. FONDAZIONE CRPA STUDI RICERCHE (IT)
12. ASSOCIATION DE COORDINATION TECHNIQUE AGRICOLE (FR)
13. CROPEYE (NL)
14. CLW ENVIRONMENTAL PLANNERS LTD (IE)
15. CELTICA FOODS LIMITED (UK)
16. GEOSPATIUMLAB SL (ES)
17. COOPERATIVE DE DESHYDRATATION DE DOMAGNE (FR)
18. CARNES OVIARAGON SCL (ES)
19. TSM TREUHAND GMBH (CH)
20. MORGAN JULIAN TIMOTHY (UK)
21. ARBEITSGEMEINSCHAFT ZUR FORDERUNG DES FUTTERBAUES (CH)
22. INRA TRANSFERT S.A. (FR)
23. IFIP-INSTITUT DU PORC ASSOCIATION (FR)
24. CENTRE TECHNIQUE INTERPROFESSIONNEL DES OLEAGINEUX METROPOLITAINS (FR)
25. INSTITUT TECHNIQUE DE L AGRICULTURE BIOLOGIQUE (FR)
26. ARVALIS INSTITUT DU VEGETAL (FR)
27. INSTITUT DE L'ELEVAGE (FR)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

CAPRI-RD



Common Agricultural Policy Regionalised Impact - The Rural Development Dimension

The Common Agricultural Policy Regionalised Impact – the Rural Development Dimension (CAPRI-RD) aims to develop and apply an operational, Pan-European tool including all Candidate and Potential Candidate countries to analyse the regional impacts of all policy measures under CAP Pillar I and II across a wide range of economic, social and environmental indicators, aligned with the CMEF. CAPRI-RD's core contains consistently linked economic models at the NUTS 2 level, the CAPRI model for agriculture, and a newly developed layer of regional CGEs. Given the importance of the EU's agricultural trade, CAPRI includes a global agricultural market model. The project will improve price transmission modelling inside the EU market, review the implementation of de-coupled payments, and maintain the CAPRI farm type layer. Harmonised and regularly updated databases, including regional Social Accounting Matrices, act as the models' sources. Quality management for data and results is ensured by clearly documented procedures that are partly based on statistical methods and sensitivity analysis. Spatial down-scaling algorithms will break down land use results to 1x1 km grid cells to facilitate the spatially explicit calculation of environmental impacts. During the project's lifetime, CAPRI-RD will be improved and expanded stepwise. This will enable an annual policy impact assessment of scenarios defined by a user board comprising major stakeholders at the European level, and allow contributions to be made to the yearly DG-AGRI outlook work. Further, yearly training sessions will develop the necessary capacity in the European Research Area to successfully apply CAPRI-RD during and after the project. A Graphical User Interface (GUI) will allow the scenarios to be defined, the model to be steered, and the results to be explained through tables, graphs and maps. Dissemination activities will include the distribution of reports, model documentation, GUI, code and data via the internet.

PROJECT COORDINATOR

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- RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITAET BONN (DE)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,295,855.00

PROJECT N°

226195

DURATION

48 months

PROJECT START DATE

March 2009

LIST OF PARTNERS

1. RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITAET BONN (DE)
2. JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
3. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
4. MIDDLE EAST TECHNICAL UNIVERSITY (TR)
5. JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FUER LANDLICHE RAUME, WALD UND FISCHEREI (DE)
6. HELSINGIN YLIOPISTO (FI)
7. UNIVERZA V LJUBLJANI (SI)
8. INSTITUTE FOR EUROPEAN ENVIRONMENTAL POLICY, LONDON (UK)
9. UNIVERSITY OF GLOUCESTERSHIRE (UK)
10. SVERIGES LANDBRUKSUNIVERSITET (SE)

FP7-KBBE-2008-2B

Common Agricultural Policy – the spatial dimension in
EU rural development programmes

CAPRI-RD

www.ilr.uni-bonn.de/agpo/rsrch/capri-rd/capri_rd_e.htm



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

CERTCOST



Economic analysis of certification systems for organic food and farming

With the ongoing growth of the organic sector and the spread of organic production across the EU, the field of organic certification has become a maze of competing labels and logos, involving different private and public standards, in addition to European law. This diversity reflects the specific conditions for organic operators in countries or regions but can also lead to confusion for both producers and consumers and may create a variety of costs. The revision process of Reg. (EEC) 2092/91 intends a review of the revised regulation by the year 2011. It is imperative to conduct a comprehensive economic analysis of the variety of existing certification systems and their impact on the internal market for organic goods. This project proposes to combine the experience and knowledge of both researchers and SMEs to fulfil the following objectives: analyse the implementation of organic certification systems and estimate all relevant expenditures or transaction costs for different certification systems along the organic food supply chain in various regions of the EU, including a candidate country and an EFTA country. It will involve stakeholders. Access to the necessary data has already been agreed with the involved partners or appropriate agencies for all seven study countries. In addition to costs, benefits of certification will be analysed, using data on consumers' recognition, image and willingness to pay for different organic logos and trademarks, with their underlying production standards and certification procedures. The project will consider consumer and certification issues equally. Economic models will be applied to analyse the determinants of costs and benefits, as well as provide recommendations for the development of risk-based certification systems. Finally, recommendations will be drawn for the EU Commission, national competent authorities and private actors in organic food and farming on how to increase effectiveness and efficiency of organic certification.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,733,185.00

PROJECT N°

207727

DURATION

39 months

PROJECT START DATE

September 2008

LIST OF PARTNERS

1. UNIVERSITAET HOHENHEIM (DE)
2. FORSCHUNGSINSTITUT FUER BIOLOGISCHEN LANDBAU (CH)
3. UNIVERSITA POLITECNICA DELLE MARCHE (IT)
4. UNIVERSITAET KASSEL (DE)
5. INSTITUT FUER MARKTOEKOLOGIE (CH)
6. EGE UNIVERSITESI (TR)
7. AARHUS UNIVERSITET (DK)
8. CESKA ZEMEDELSKA UNIVERZITA V PRAZE (CZ)
9. ISTITUTO PER LA CERTIFICAZIONE ETICA ED AMBIENTALE (IT)
10. ABERYSTWYTH UNIVERSITY (UK)
11. PROGRESSIVE FARMING TRUST LTD T/A THE ORGANIC RESEARCH CENTRE (UK)

FP7-KBBE-2007-1

CERTCOST



Costs of different standard setting and certification systems for organic food and farming

www.certcost.org/



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

CLAIM



Supporting the role of the Common agricultural policy in Landscape valorisation: Improving the knowledge base of the contribution of landscape Management to the rural economy

The provision of public goods (including landscape services) in rural areas is recognized as one of the key topics for the future of agriculture and rural policy. Agriculture plays a major role in landscape management through its complex interlinkages with landscape features. In turn, the Common Agricultural Policy (CAP) remains an important driver of landscape management due to its importance as a determinant of farming activities in the EU.

The main objective of the CLAIM project is to provide the knowledge base to support an effective CAP policy design in the direction of improved landscape management, particularly providing insights into the ability of landscape to contribute to the production of added value for society in rural areas.

CLAIM is focused in particular on understanding and enhancing the contribution of landscapes management to socio-economic development and agricultural competitiveness in rural areas. This will be based on a pragmatic consideration of landscape services and their analysis through a mixed-method approach, taking into account the wider EU policy strategies (in particular related to innovation and the bioeconomy). The main expected result of the CLAIM project is an evidence-based policy support framework on the different and possible contributions of agriculture and the CAP to landscape management. The framework will be mainly developed and validated through a set of 9 case studies, a strong involvement of stakeholders at different territorial levels and a wide coverage of the perspectives of EU and candidate countries. The framework will finally take the practical form of a web-based manual to be implemented in accordance to stakeholders needs and indications.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

1,499,400.00

PROJECT N°

289578

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
2. LEIBNIZ-ZENTRUM FUER AGRARLANDSCHAFTSFORSCHUNG (ZALF) E.V. (DE)
3. JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
4. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
5. VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG (NL)
6. INSTITUTO ANDALUZ DE INVESTIGACIONY FORMACION AGRARIA PESQUERA ALIMENTARIA Y DE LA PRODUCCION ECOLOGICA (ES)
7. SZKOLA GLOWNA GOSPODARSTWA WIEJSKIEGO (PL)
8. SULEYMAN DEMIREL UNIVERSITY (TR)
9. AGRICULTURAL UNIVERSITY (BG)
10. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)

FP7-KBBE-2011-5

The CAP and landscape management

CLAIM

<http://claimproject.eu/>



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

COMPETE



International comparisons of product supply chains in the agro-food sectors: determinants of their competitiveness and performance on EU and international markets

The project will deliver a coherent and innovative evaluation of competitiveness of European food chains by integrating various new approaches. Based on this, the research results allows to deduce a congruent, coherent and consistent set of policy recommendations aiming at improving competitiveness and promoting the Knowledge Based Bio-Economy in Europe.

The analysis is conducted along two lines, (1) conception and indicators of competitiveness and (2) its determinants. In the first part a comprehensive definition of competitiveness will be developed by integrating the finding from selected theoretical micro and macro approaches. In this respect the conventional conception will be extended by moving from the industry to the value chain perspective and considering commodities as well as intermediary and final products. This framework constitutes the basis for the empirical analysis, where the EU position on world markets will be discussed in relation to that of major competitors.

The second part deals with selected determinants of competitiveness. These include policy intervention and business environment, productivity in agriculture and food processing, the functioning of domestic and international markets, the choice of governance structures as well as innovative activities in food processing. The investigation of each determinant will be innovative and extends the state of the art by deepening the theoretical backgrounds, extending the methodological approaches or applying empirical methods for the first time. The analysis of the determinants will contribute significantly to be better and deeper understanding of competitiveness and the deduction of policy recommendations.

Research will be conducted by a team that was constituted according to the needs of the research project. Each partner is a designated expert in his/her area of research. Past co-operations among partners assure that all tasks will be arranged target-oriented in due time.

FP7-KBBE-2012-6-singlestage

COMPETE



International comparisons of product chains in the agro-food sectors: determinants of their competitiveness and performance on EU and international markets

Website not available yet



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,422,725.00

PROJECT N°

312029

DURATION

36 months

PROJECT START DATE

under negotiation

LIST OF PARTNERS

1. LEIBNIZ INSTITUT FUER AGRARENTWICKUNG IN MITTEL- UND OSTEUROPA (DE)
2. INSTITUTE OF AGRICULTURAL ECONOMICS (RO)
3. WAGENINGEN UNIVERSITEIT (NL)
4. UNIVERZA NA PRIMORSKEM UNIVERSITA DEL LITORALE (SI)
5. CESKA ZEMEDELSKA UNIVERZITA V PRAZE (CZ)
6. UNIVERSITA DEGLI STUDI DI MILANO (IT)
7. UNIVERSITY OF NEWCASTLE UPON TYNE (UK)
8. EKONOMSKI FAKULTET, UNIVERZITET U BEOGRADU (RS)
9. MAGYAR TUDOMANYOS AKADEMIA KOZGAZDASAG- ES REGIONALIS TUDOMANYI KUTATOKOZPONT (HU)
10. UNIWERSYTET WARSZAWSKI (PL)
11. VOD JETRICHOVEC, DRUZSTVO (CZ)
12. POTRAVINARSKA KOMORA CESKE REPUBLIKY (CZ)
13. BALKAN SECURITY NETWORK (RS)
14. ASOCIATIA ROMANA DE ECONOMIE RURALA SI AGROALIMENTARA VIRGIL MADGEARU (RO)
15. BUNDESVEREINIGUNG DER DEUTSCHEN ERNAHRUNGSINDUSTRIE EV (DE)
16. FEDERAZIONE ITALIANA DELL'INDUSTRIALIMENTARE ASSOCIAZIONE (IT)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

EAWP



European Animal Welfare Platform: adding welfare quality to food

Recent crises such as foot and mouth disease and avian influenza have raised public awareness of animal production and that issues such as human and animal health, quality, and animal welfare have to be considered.

A high proportion (62%) of Europeans indicated their willingness to modify their shopping patterns and purchasing choices in response to welfare issues (Eurobarometer, 2007). However, their expressed willingness often fails to result in purchase. The latter may at least partly reflect a lack of transparency in the market for animal products. Indeed, 51% of respondents said that they could never or rarely identify products sourced from welfare-friendly systems.

Clearly, it is extremely important for the industry, both from a corporate social responsibility and a market point of view, to re-build and maintain consumer trust in relation to the welfare of food-producing animals. This demands the development of credible, reliable and transparent welfare assessment systems, product information and certification schemes to support communication to the consumer.

The present proposal addresses the above needs by developing a European Animal Welfare Platform (EAWP) that will facilitate the exchange of knowledge, experience and expertise in order to effectively support the implementation of welfare assessment and information systems and welfare improvement strategies. It will also support prioritising of R&D in the area of farm animal welfare. This proposal is unique in that it includes representatives of animal welfare organisations, major companies in the animal production sector and leading research institutions and it clearly demonstrates that animal welfare has become an issue of commercial as well as societal relevance. We believe this venture will significantly strengthen the sustainability of European agriculture.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

992,105.00

PROJECT N°

212326

DURATION

44 months

PROJECT START DATE

May 2008

LIST OF PARTNERS

1. SVERIGES LANTBRUKSUNIVERSITET (SE)
2. KONINKLIJKE AHOLD N.V. (NL)
3. FAI FARMS LTD (UK)
4. EUROGROUP FOR ANIMAL WELFARE (BE)
5. MCDONALD'S EUROPE LIMITED (UK)
6. GESCO CONSORZIO COOPERATIVO SOCIETA COOPERATIVA AGRICOLA SC (IT)
7. DANISH MEAT ASSOCIATION (DK)
8. INALCA-INDUSTRIA ALIMENTARE CARNI SPA INALCA SPA (IT)
9. DEANS FOODS LTD (UK)
10. MARINE HARVEST NORWAY AS (NO)
11. GRUPO VALL COMPANYYS (ES)
12. AUTOGRILL SPA (IT)
13. COOP ITALIA - SOCIETA' COOPERATIVASCARL (IT)
14. ASG VEEHOUDERIJ BV (NL)
15. VION GMBH (DE)
16. LOHMANN & CO AG (DE)
17. LODEWIJCKX NV (BE)
18. SCOTTISH SEA FARMS LTD (UK)
19. FOODVEST LIMITED (UK)
20. VET-AQUA INTERNATIONAL (IE)

FP7-KBBE-2007-1

EAWP



Establishment of an information platform on the protection and welfare of animals

www.animalwelfareplatform.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

ECONWELFARE



Good animal welfare in a socio-economic context: Project to promote insight on the impact for the animal, the production chain and society of upgrading animal welfare standards.

The project proposal has been prepared in response to the call KBBE-2007-1-4-15 "Assessing the socio-economic consequences and costs benefits of measures promoting good animal welfare". Central in this call is support to develop European policies implementing the Action Plan on Animal Welfare.

Overall objective of the project is related to the policy instruments needed to achieve the aims of the Action Plan on Animal Welfare. At the end of the project we want to say what policy instruments are effective in the route towards higher animal welfare representing the concerns of civil society and in which competitiveness of the livestock industry is guaranteed.

Basic questions in relation to objective

1. What are the current welfare initiatives and standards within the EU and its trade partners?
2. What are strength and weaknesses of these initiatives and standards to the animal, society and the production chain?
3. What policy instruments can be designed to promote high(er) animal welfare standards as aimed at in the Action Plan on Animal Welfare, and how can progress be monitored?
4. What are the benefits, costs and trade impacts of upgraded welfare standards?

Activities in relation to objective

- Communicate and debate to realize interaction across scientists, relevant stakeholders and citizens
- Review and analyse current state of animal welfare in selected EU states and third countries
- Examine strength and weaknesses in the current animal welfare standards to opinion of animal scientists, the supply chain, and consumers and citizens
- Perform a SWOT-analysis on approaches for upgraded animal welfare
- Brainstorm on strategic options for the EU to implement the Action Plan on Animal Welfare
- Assesses costs and benefits when approaches and policies are introduced within the production chain
- Perform macro-economic analysis of the competitiveness of the European agricultural sectors and the impact on world trade
- Organise a concluding work.

FP7-KBBE-2007-1

ECONWELFARE

Assessing the socio-economic consequences and costs benefits of measures promoting good animal welfare

www.econwelfare.eu



PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

998,554.00

PROJECT N°

213095

DURATION

36 months

PROJECT START DATE

August 2008

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. CENTRO RICERCA PRODUZIONI ANIMALI - C.R.P.A. S.P.A. (IT)
3. FORSCHUNGSINSTITUT FÜR BIOLOGISCHENLANDBAU STIFTUNG (CH)
4. SZKOLA GŁOWNA GOSPODARSTWA WIEJSKIEGO (PL)
5. SVERIGES LANTBRUKSUNIVERSITET (SE)
6. UNIVERSITY OF NEWCASTLE UPON TYNE (UK)
7. UNIVERSIDAD DE EXTREMADURA (ES)
8. UNIVERSITET SV KIRIL I METODII VO SKOPJE VETERINAREN FAKULTET (MK)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

ENVIEVAL



Development and application of new methodological frameworks for the evaluation of environmental impacts of rural development programmes in the EU

ENVIEVAL will develop and integrate advanced evaluation tools into new methodological frameworks for the evaluation of environmental impacts of rural development programmes at micro- and macro-levels. In order to achieve this main aim, the proposed project has five objectives: i) to review implemented rural development programmes, existing monitoring and indicator systems, and new methodological developments in environmental policy evaluation; ii) to develop new methodological frameworks for the evaluation of net environmental effects of rural development programmes against their counterfactual; iii) to test and validate the selected evaluation tools through public good case study applications in seven partner countries and close collaboration with the European Evaluation Network, national and regional evaluators and managing authorities; iv) to assess the cost-effectiveness of the tested indicators and evaluation methods; and v) to provide a user-friendly methodological handbook for the evaluation of environmental impacts of rural development programmes. The methodological handbook will address the main challenges of environmental evaluations of rural development programmes taking into account potential changes to the CMEF post 2013. The main innovative aspects of the new methodological frameworks are that they enable the integration of micro- and macro-level evaluations (and their results) and provide guidance on the selection and application of cost-effective evaluation methods to estimate net effects of rural development programmes on the different main public goods from farming and forestry. ENVIEVAL will cover a set of EU Member States of Germany, UK, Greece, Finland, Italy, Lithuania, and Hungary, within which it will choose regional study areas to test the suitability of methods to evaluate the impacts of the rural development programmes on different environmental public goods.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

1,738,444.00

PROJECT N°

312071

DURATION

36 months

PROJECT START DATE

January 2013

LIST OF PARTNERS

1. JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FUER LANDLICHE RAUME, WALD UND FISCHEREI (DE)
2. THE JAMES HUTTON INSTITUTE LBG (UK)
3. AGRICULTURAL UNIVERSITY OF ATHENS (EL)
4. MAA JA ELINTARVIKETA LOUDEN TUTKIMUSKESKUS (FI)
5. ISTITUTO NAZIONALE DI ECONOMIA AGRARIA (IT)
6. BALTIJOS APLINKOS FORUMAS VSI (LT)
7. SZENT ISTVAN EGYETEM (HU)

FP7-KBBE-2012-6-singlestage

ENVIEVAL



Development and application of methodologies and tools, including indicators, for the assessment of environmental impacts of rural development programmes in the EU

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

FACEPA



Farm Accountancy Cost Estimation and Policy Analysis of European Agriculture

The proposed project will provide EU policy makers with information, data, quantitative instruments (economic models) and empirical expertise on cost of production for various types of agricultural products using the FADN data. More specifically, the purpose is to offer first a general cost of production model that could be used to estimate cost of production for key agricultural commodities produced in the European Union. This model will be implemented and validated for a wide range of EU-member countries. Further, additional applications estimating costs of production in EU agriculture, using FADN data and based on different analytical tools, will be developed in this research project. The expected outputs include: (a) a review of experiences of estimating cost of production in the EU and other major agricultural producing countries; (b) the development of a general cost of production model for EU agriculture, (c) the application of the former model to several agricultural products (crop products, milk and pigs) and to several EU member countries using FADN data, (d) an operational computer tool with user-friendly interface that can be used by relevant services of the EU Commission to estimate costs of production, (e) extensions and further applications aimed at studying farm performance and analysing environmental aspects, and (f) an evaluation of the impact of agricultural policy measures on farm income and return to capital and labour using FADN data.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,214,277.00

PROJECT N°

212292

DURATION

42 months

PROJECT START DATE

April 2008

LIST OF PARTNERS

1. SVERIGES LANTBRUKSUNIVERSITET (SE)
2. SWEDISH INSTITUTE FOR FOOD AND AGRICULTURAL ECONOMICS (SE)
3. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (INRA) (FR)
4. UNIVERSITE CATHOLIQUE DE LOUVAIN (BE)
5. ISTITUTO NAZIONALE DI ECONOMIA AGRARIA (IT)
6. JOHANN HEINRICH VON THUNEN INSTITUTS BUNDESFORSCHUNGSINSTITUT FUR LANDLICHE RAUME WALD UND FISCHEREI (DE)
7. BUDAPESTI CORVINUS EGYETEM (HU)
8. EESTI MAAULIKOOL (EE)
9. MINISTRY OF AGRICULTURE AND FOOD (BG)
10. LUNDS UNIVERSITET (SE)
11. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

FP7-KBBE-2007-1

Cost of production using FADN data

FACEPA

<http://facepa.slu.se>



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

FACTOR MARKETS



Comparative Analysis of Factor Markets for Agriculture across the Member States

Well functioning factor markets are a crucial condition for the competitiveness and growth of agriculture and for rural development. At the same time, the functioning of the factor markets themselves are influenced by changes in agriculture and the rural economy, and in EU policies. Member state regulations and institutions affecting land, labour, and capital markets may cause important heterogeneity in the factor markets, which may have important effects on the functioning of the factor markets and on the interactions between factor markets and EU policies.

The general objective of the Factor Market project is to analyse the functioning of factor markets for agriculture in the EU-27, including the Candidate Countries. The Factor Market project will compare the different markets, their institutional framework and their impact on agricultural development and structural change, as well as their impact on rural economies, for the Member States, Candidate Countries and the EU as a whole. The Factor Market project will focus on capital, labour and land markets.

The results of this study will contribute to a better understanding of the fundamental economic factors affecting EU agriculture, thus allowing better targeting of policies to improve the competitiveness of the sector.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

1,979,023.00

PROJECT N°

245123

DURATION

36 months

PROJECT START DATE

September 2010

LIST OF PARTNERS

1. CENTRE FOR EUROPEAN POLICY STUDIES (BE)
2. LEIBNIZ INSTITUT FUER AGRARENTWICKUNG IN MITTEL- UND OSTEUROPA (DE)
3. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
4. CENTRE FOR PLANNING AND ECONOMIC RESEARCH (EL)
5. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
6. MAA JA ELINTARVIKETA LOUDEN TUTKIMUSKESKUS (FI)
7. SLOVENSKA POLNOHOSPODARSKA UNIVERSITA V NITRE (SLOVAK AGRICULTURAL UNIVERSITY IN NITRA) (SK)
8. SVERIGES LANTBRUKSUNIVERSITET (SE)
9. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
10. TECHNISCHE UNIVERSITAET MUENCHEN (DE)
11. UNIVERSITA DEGLI STUDI DI MILANO (IT)
12. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
13. UNIVERSITA CATTOLICA DEL SACRO CUORE (IT)
14. UNIVERSITY OF KENT (UK)
15. UNIVERZA NA PRIMORSKEM- UNIVERSITA DELLA PRIMORSKA UNIVERSITA DEL LITORALE (SI)
16. UNIWERSYTET WARSZAWSKI (PL)
17. JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FUER LANDLICHE RAUME, WALD UND FISCHEREI (DE)

FP7-KBBE-2009-3

FACTOR MARKETS

Comparative analysis of factor markets for agriculture across the Member States

www.factormarkets.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

FADNTOOL



Integrating Econometric and Mathematical Programming Models into an Amendable Policy and Market Analysis Tool using FADN Database

The design of effective and targeted CAP measures relies on a proper assessment of the impacts of EU policy changes and market developments on farmers and the whole economy. Uncertainty, instability and price volatility that relentlessly reshape agricultural markets today, call upon the development of new modelling tools able to scrutinise all relevant dynamics while also remaining easy to use and amend. The project improves and extends existing economic models that make use of the FADN informatics environment by developing a unique modelling framework that (i) encompasses all aspects of farmers' production decisions (ii) targets the single farm but also consistently aggregates to regional, national and the EU level (iii) takes into consideration the effects of uncertainty and risk on farmers' behaviour (iv) can be employed in different market environments, i.e. throughout the EU-27 and (v) can be amended and/or fine-tuned by EU and national FADN units. The project draws upon two major modelling tools (econometric and mathematical programming), while the validity of the employed theoretical models will be verified by their empirical application in each EU-27 country. The project's final outcome is the construction of a methodological framework comprised of state-of-the-art economic models custom-built for the FADN database that will provide to policy makers an inclusive impact analysis of the effects of alternative policy and market developments scenarios under a real-life, dynamic context. Given the complexity of this framework, a simplified version of the models will be developed, all consistently and operatively joined into an amendable interface that will be user-friendly and easy to operate and still allow for a concise replication of our policy simulation results, capable to target at the efficiency of CAP measures, i.e. the single farm payment, although the whole framework will be also applicable providing some acquaintance with modelling parameterisation.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,499,862.00

PROJECT N°

265616

DURATION

36 months

PROJECT START DATE

April 2011

LIST OF PARTNERS

1. ARISTOTELIO PANEPISTIMIO THESSALONIKIS (EL)
2. UNIVERSITE DE PERPIGNAN (FR)
3. WAGENINGEN UNIVERSITEIT (NL)
4. UNIVERSITY OF MACEDONIA ECONOMICS AND SOCIAL SCIENCES (EL)
5. UNIVERSITY OF CYPRUS (CY)
6. RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITAET BONN (DE)
7. JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FUER LANDLICHE RAUME, WALD UND FISCHEREI (DE)
8. SVERIGES LANTBRUKSUNIVERSITET (SE)
9. THE UNIVERSITY OF WARWICK (UK)
10. SZKOLA GLOWNA GOSPODARSTWA WIEJSKIEGO (PL)
11. UNIVERSITY OF NATIONAL AND WORLD ECONOMY (BG)
12. UNIVERSITA CATTOLICA DEL SACRO CUORE (IT)
13. JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)

FP7-KBBE-2010-4

FADNTOOL



Development of modelling tools based on Farm Accountancy Data Network data adapted to assess the dynamic impacts of the Common Agricultural Policy

www.fadntool.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

FARMPATH



Farming Transitions: Pathways Towards Regional Sustainability of Agriculture in Europe

In FarmPath, we propose that increasing sustainability in agriculture is best addressed by enabling flexible combinations of farming models, which vary to reflect the specific opportunity sets embedded in regional culture, agricultural capability, diversification potential, ecology, and historic ownership and governance structures. We will enable progress towards this goal of increased regional sustainability of agriculture by through a transdisciplinary research approach, where knowledge is co-produced by scientists, stakeholders and practitioners. FarmPath will specifically integrate theoretical and conceptual approaches to transition and transition management with recent research on adaptive capacity and resilience in farming systems, food regimes, and farm level transitions to multifunctionality, and build on previous EC funded research projects on sustainability and innovation in farming systems, and production and consumption chains. FarmPath will assess a set of farm and regional level sustainability initiatives to identify conflict and complementarity, focusing on how combinations of initiatives, actors, technologies and policies can achieve synergies which initiate transition pathways at regional level. FarmPath will engage in participatory visioning and scenario assessment in contrasting national and European regions, to identify transition pathways: combinations of visions and the social and technical mechanisms and innovations needed to reach these visions. This will lead to the development of a handbook for assessing and identifying actions which can be taken by policy makers to facilitate transition towards regionally sustainable agriculture. FarmPath will also investigate issues surrounding young people and new entrants to farming in specific relation to these initiatives and scenarios. Research findings will be presented and discussed in an international conference, and developed into an academic book.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

1,498,893.00

PROJECT N°

265394

DURATION

36 months

PROJECT START DATE

March 2011

LIST OF PARTNERS

1. THE MACAULAY LAND USE RESEARCH INSTITUTE (UK)
2. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
3. AGRICULTURAL UNIVERSITY OF ATHENS (EL)
4. UNIVERSITY OF NATIONAL AND WORLD ECONOMY (BG)
5. INSTITUT FUER LAENDLICHE STRUKTURFORSCHUNG AN DER JOHANN WOLFGANG GOETHE UNIVERSITAET, FRANKFURT AM MAIN (DE)
6. CESKA ZEMEDELKA UNIVERZITA V PRAZE (CZ)
7. UNIVERSITY OF PLYMOUTH (UK)
8. UNIVERSIDADE DE EVORA (PT)
9. INSTITUT SUPERIEUR DES SCIENCES AGRONOMIQUES, AGROALIMENTAIRES, HORTICOLES ET DU PAYSAGE (FR)

FP7-KBBE-2010-4

FARMPATH

Assessment of transition pathways to sustainable agriculture and social and technological innovation needs

www.farmpath.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

FOODMETRES



Food Planning and Innovation for Sustainable Metropolitan Regions

The proposed project 'Food Planning and Innovation for Sustainable Metropolitan Regions' (FOODMETRES) thrives to assess both the environmental and the socio-economic impacts of food chains with regard to the spatial, logistical and resource dimension of growing food as well as food planning and governance. Recognising that food production and consumption is not only linked via food chains in a physical-logistic way, but above all via value chains in terms of social acceptance, FOODMETRES is designed to combine quantitative and evidence-based research principles with qualitative and discursive methods to address the wider dimensions of food chains around metropolitan agro-systems.

The main goals are:

- Identify concepts as well as practical examples for food chain innovation in the context of small-scale urban, peri-urban and peri-urban-rural forms of agriculture and food production up to large-scale metropolitan production regimes geared towards feeding urban populations;
- Assess the economic, environmental and social impacts of innovative food chain systems from small scale to large scale, making use of the ecological footprint and product life cycle analysis with special emphasis on efficiency, regional competitiveness, cultural identity (landscapes and regional markets) and ecosystem services such as water management, nutrient recycling and biodiversity;
- Study and compare technical, logistical, organisational and governance aspects of innovative food chain systems in selected case studies to define best practice when engaging regional stakeholders from both business and policy in sustainable food planning at the level of metropolitan regions.
- Supply scenario modeling and impact assessment tools to all stakeholders in urban-peri-urban areas to assist with planning and decision making. This is complemented by active knowledge brokerage to speed up innovation and innovation exchange within the case studies, but also for any other users in urban areas of Europe or developing countries. The emergence – or should one say the return? – of diversified forms of urban and metropolitan agriculture is a global phenomenon. However it is important to recognize the often substantial structural and economic disparities between Europe and developing countries and their differences in essential needs and requirements regarding food security and safety. While agriculture in the Member States of the European Union is largely influenced by CAP and the world market, developing countries are facing an entirely different set of challenges and require special attention. We therefore have decided to also research opportunities for food chain innovation in Kenya, as a reference point for global perspectives under which we can assess and possibly learn from different value chains such as in the metropolitan region of Nairobi.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

1,493,671.00

PROJECT N°

312185

DURATION

36 months

PROJECT START DATE

under negotiation

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. LEIBNIZ-ZENTRUM FUER AGRARLANDSCHAFTSFORSCHUNG (ZALF) E.V. (DE)
3. COVENTRY UNIVERSITY (UK)
4. UNIVERSITA DEGLI STUDI DI MILANO (IT)
5. UNIVERZA V LJUBLJANI (SI)
6. UNIVERSITY OF NAIROBI (KE)
7. STICHTING AFRIKA-STUDIECENTRUM (NL)
8. INNOVATIVE FUTURES RESEARCH (UK)
9. AGRIMERCATO DI MILANO E LODI (IT)
10. MAPSUP NL (NL)
11. SUSTAIN: THE ALLIANCE FOR BETTER FOOD AND FARMING (UK)
12. FÖRDERGEMEINSCHAFT ÖKOLOGISCHER LANDBAU BERLIN-BRANDENBURG E.V. (DE)
13. VERHOEVEN FRANCISCUS PETRUS MARIA BOERENVERSTAND CONSULTANCY (NL)
14. DORÉN + KOESTER GBR (DE)
15. PRO GEAPRODUKT, POSLOVNE STORITVE, D.O.O. (SI)
16. PRO CONTUS, POSLOVNE STORITVE, D.O.O. (SI)
17. HENRY DOUBLEDAY RESEARCH ASSOCIATION (UK)
18. IGG MALZFABRIK MBH (DE)

FP7-KBBE-2012-6-singlestage

FOODMETRES

Short chain delivery of food for urban-peri-urban areas

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

FUTUREFARM



Integration of Farm Management Information Systems to support real-time management decisions and compliance of management standards

The farm of the future will have to effectively manage information on and off their farms to improve economic viability and reduce environmental impact. All three scales, in which agricultural activities need to be harmonized with economical and environmental constraints, require integrated ICT adoption: (i) improvement of farm efficiency; (ii) integration of public goods provided by farming; (iii) relate to the environmental and cultural diversity of Europe's agriculture by addressing the region-farm interaction. In addition, the communication between agriculture and other societal sectors need improvement. Crop products going into the food chain must show their certified provenance through a recognised management strategy and farmers receiving subsidies are now linked to respect of the environment through compliance of standards.

To this end, an integration of information systems is needed to advise managers of formal advice, recommended guidelines and implications resulting from different scenarios at the point of decision making during the crop cycle. This will help directly with making better decisions as the manager will be helped to be compliant at the point and time of decision.

In this project the appropriate tools and technologies will be conceptually designed, prototypically developed and evaluated under practical conditions.

Precision Farming (PF) is very data intensive and provides a wealth of information that can be better used to help improve crop management and documentation. Based on the technologies of this system new Farm Information Management Systems (FMIS) can be designed

As all of the relevant farm data is already available in the proposed information system, or may be automatically integrated using standardised services, documentation in the form of instructions to operators, certification of crop provenance and cross compliance of adopted standards can be generated more easily than the present system.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,993,609.00

PROJECT N°

212117

DURATION

41 months

PROJECT START DATE

January 2008

LIST OF PARTNERS

1. KENTRO EREVNAS TECHNOLOGIAS KAI ANAPTYXIS THESSALIAS (EL)
2. AARHUS UNIVERSITET (DK)
3. KØBENHAVNS UNIVERSITET (DK)
4. UNIVERSITÄT ROSTOCK (DE)
5. LEIBNIZ-ZENTRUM FUER AGRARLANDSCHAFTSFORSCHUNG (ZALF) E.V. (DE)
6. WIRELESSINFO (CZ)
7. MAA JA ELINTARVIKETA LOUDEN TUTKIMUSKESKUS (FI)
8. UNIVERSITA DEGLI STUDI DELLA BASILICATA (IT)
9. WAGENINGEN UNIVERSITEIT (NL)
10. CLAAS AGROSYSTEMS GMBH & CO KG (DE)
11. PROGIS SOFTWARE GMBH (AT)
12. ARISTOTELIO PANEPISTIMIO THESSALONIKIS (EL)
13. UNIVERSIDAD DE ALMERIA (ES)
14. CRANFIELD UNIVERSITY (UK)
15. AALTO-KORKEAKOULUSAATIO (FI)

FP7-KBBE-2007-1

The farm of tomorrow

FUTUREFARM

www.futurefarm.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

IMPRO



Impact matrix analysis and cost-benefit calculations to improve management practices regarding health status in organic dairy farming

Animal health status in organic dairy farming does not in all respect meet consumers' expectations. Improvements are crucial to support consumers' confidence and their willingness to pay premium prices. These are urgently needed to cover the higher production costs. Previous herd health planning concepts have prepared the ground for further advancements. However, recommended measures are often implemented only to an unsatisfactory degree, differing widely between farms, and resulting in an improper animal health status.

The IMPRO project aims to substantially overcome weak points in current health management strategies on organic dairy farms and to increase the implementation of evidence based measures and to improve practice of health management. This will be achieved by a multidisciplinary and participatory approach to develop farm specific solutions regarding preventive measures and early treatment strategies. Researchers with a thorough experience in conducting applied research will aim for the following:

- to develop a participatory and farm-centric diagnostic tool for a sound diagnostic procedure at the farm level, identifying the most effective measures to improve animal health,
- to evaluate farm-specific costs and benefits of recommended measures, to optimise farm-specific allocation of available resources, and to emerge incentives,
- to examine the motivation and attitudes of farmer, advisor, and veterinarian directly involved in health management practice,
- to elaborate reference values for achievable standards with respect to animal health status,
- to develop a pro-active monitoring protocol aiming for improved effectiveness of preventive and treatment strategies and for a reduction in the use of allopathic remedies,
- to assess the manageability of alternative treatments according to the state-of-the-art,
- to develop a software-based tool including health monitoring, farm diagnostics' procedures, cost-benefit calculation, and break-even analysis.

FP7-KBBE-2012-6-singlestage

IMPRO



Improved management practices and alternative treatments to improve animal health in organic farming systems

www.impro-dairy.eu



PROJECT COORDINATOR

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- UNIVERSITAET KASSEL (DE)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,765,787.00

PROJECT N°

311824

DURATION

48 months

PROJECT START DATE

October 2012

LIST OF PARTNERS

1. UNIVERSITAET KASSEL (DE)
2. SVERIGES LANTBRUKSUNIVERSITET (SE)
3. ECOLE NATIONALE VETERINAIRE, AGROALIMENTAIRE ET DE L'ALIMENTATION NANTES ATLANTIQUE (FR)
4. WAGENINGEN UNIVERSITEIT (NL)
5. INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES (ES)
6. DATA SERVICE PARETZ GMBH (DE)
7. THE UNIVERSITY OF READING (UK)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

INEMAD



Improved Nutrient and Energy Management through Anaerobic Digestion

This proposal, INEMAD will concentrate on innovative strategies to reconnect livestock and crop production farming systems. New flows of energy and materials within the agricultural sector (or linked to the agricultural sector) will be analysed and will create opportunities for re-thinking the relation between crop and livestock production. Various options to cope with recycling, greenhouse gas (GHG) mitigation, and bio-based economy will need an integral assessment on energy and nutrient flows and will cause new arrangements between firms, land use and land management. inemad will address the question of what new methods and how new arrangements should be developed to restore the recycling within the specialisation context.

To realize these ambitions, the leading principle of inemad is a triangular enlargement of the traditional farming systems with a "processing" system. Processing is proposed as a third system, to be linked with crop and the livestock production, in order to increase agricultural productivity while reducing external energy input and closing nutrient cycle. Nutrient recycling can be done by biogas production and the use of digestate as fertilizer. Digestate can not only replace the manure but also chemical fertiliser because of its comparable properties. inemad will analyse improvements options for biogas plants, valorisation options for the digestate, improve the management by the use of optimisation models and compare organisational structures.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,961,624.00

PROJECT N°

289712

DURATION

48 months

PROJECT START DATE

April 2012

LIST OF PARTNERS

1. UNIVERSITEIT GENT (BE)
2. SOLTUB TRADING AND SERVICE PROVIDING LIMITED PARTNERSHIP (HU)
3. AGRICULTURAL UNIVERSITY (BG)
4. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
5. EIGEN VERMOGEN VAN HET INSTITUUT VOOR LANDBOUW EN VISSERIJONDERZOEK (BE)
6. DLV BELGIUM CVBA (BE)
7. KØBENHAVNS UNIVERSITET (DK)
8. ENECO BV (NL)
9. NACIONALNA ASOCIACIA PO BIOMASA (BG)
10. B.T.G. BIOMASS TECHNOLOGY GROUP BV (NL)
11. DEPARTEMENT DE L'AINIS (FR)
12. SISACKO-MOSLAVACKA ZYAPANJA (HR)
13. BVBA INNOVA ENERGY (BE)
14. IZES GGMBH (DE)

FP7-KBBE-2011-5

INEMAD



Towards land management of tomorrow
- Innovative forms of mixed farming for
optimized use of energy and nutrients

www.inemad.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

JOLISAA



Joint Learning about Innovation Systems in African Agriculture

The JOLISAA project aims to increase understanding of agricultural innovation systems focusing on smallholders' livelihoods and the articulation of local/traditional and global knowledge. Lessons learnt about past and ongoing experiences with agricultural/rural innovation in East, Southern and West Africa will be synthesised by combining joint case-study assessment with capacity-strengthening and networking at various scales. Case studies will tackle diverse innovation types and scales: from natural resource management to production and agribusiness, from local initiatives to national and regional ones. Joint learning will be fostered by engaging diverse stakeholders, including researchers, practitioners and policymakers. The project will deliver relevant, pragmatic and collectively validated recommendations to the EC and to African decision-makers for future research, practice and policy.

Over 30 months, a small consortium of European and African partners involving highly experienced and motivated research, development, capacity-strengthening and networking institutions will facilitate an iterative process consisting of five interlinked thematic Work Packages (WPs). In WP1, an analytic framework and an operational approach will be developed based on an innovation-system perspective and carefully adapted to the context and experiences of three regions in Africa. WP2 will involve joint assessment and learning from a series of case studies in Kenya, South Africa and Benin. In WP3, the capacity of members of existing multistakeholder innovation platforms to assess their experiences and to facilitate innovation will be strengthened, in close interaction with case-study development. In WP4, lessons will be shared and discussed within existing national innovation platforms across Africa and with European/international institutions. WP5 will compile and share the project outputs and deliver them in formats suitable for a range of audiences, from academia to policymakers.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,657.00

PROJECT N°

245319

DURATION

42 months

PROJECT START DATE

February 2010

LIST OF PARTNERS

1. CENTRE DE COOPERATION INTERNATIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
2. STICHTING ETC (NL)
3. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
4. STICHTING INTERNATIONAL CENTRE FOR DEVELOPMENT ORIENTED RESEARCH IN AGRICULTURE (NL)
5. UNIVERSITY OF PRETORIA (ZA)
6. KENYA AGRICULTURAL RESEARCH INSTITUTE (KE)
7. UNIVERSITE D ABOMEY CALAVI UAC (BJ)

FP7-KBBE-2009-3

JOLISAA

Agricultural Innovation Systems & Traditional
knowledge – Mandatory ICPC (African ACP)

www.jolisaa.net



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

NTM-IMPACT



Assessment of the impacts of non-tariff measures - NTM on the competitiveness of the EU and selected trade partners

The overall objective of the project is to collect and analyze new data on non-tariff measures (NTMs), particularly on governmental standards and regulations that prescribe the conditions for importing agri-food products into the EU market and into the markets of the main competing players. Furthermore, impacts from EU NTMs on least developing country (LDC) exports are examined.

The project will deliver the following results:

1. An analytical framework for defining measures, methods, products and countries.
2. A data base on NTMs in EU, USA, Canada, Japan, China, India, Brazil, Argentina, Australia, Russia and New Zealand.
3. Comparative analyses on the impact of NTMs on agri-food trade of the EU.
4. Policy recommendations from case studies for quantifying NTMs on fruits and vegetables, meat and dairy trade clusters with the EU.
5. Policy recommendations from case studies on the impacts of EU private and public standards in LDCs.
6. Dissemination of project results to key stakeholders.

This will be achieved:

- A. By optimizing complementarities of the project with ongoing NTM research on the TRAINS data base at UNCTAD.
- B. By organizing the research work in research, database, management and dissemination work packages.
- C. By developing research methodologies that are innovative and robust, optimizing the direct usefulness of the end results for the end users.
- D. By proposing a partner consortium that together reunites the relevant needs, for:
 - Scientific excellence and international project experience
 - Appropriate geographic coverage to collect the required data in all countries
 - Linkages and complementarities with ongoing international NTM analyses (UNCTAD, OECD, World Bank, IFPRI)
 - Policy contacts, dialogue and influence
 - Efficient and effective project management
- E. With a budget of 326.5 person months, 2.3 M€ EC request, for 18 partners, over 28 months.

FP7-KBBE-2008-2B

NTM-IMPACT

Macro-economic analysis of competitiveness,
including non-tariff barriers

www.ntm-impact.eu



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,372,534.00

PROJECT N°

227202

DURATION

30 months

PROJECT START DATE

April 2009

LIST OF PARTNERS

1. CENTRE DE COOPERATION INTERNATIONALE EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
2. RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITAET BONN (DE)
3. INSTITUTE OF DEVELOPMENT STUDIES (UK)
4. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
5. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
6. UNIVERSIDADE DE SAO PAULO (BR)
7. INSTITUTO NACIONAL DE TECNOLOGIA AGROPECUARIA (AR)
8. VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY (US)
9. UNIVERSITE LAVAL (CA)
10. UNIVERSITY OF OTAGO (NZ)
11. RESEARCH AND INFORMATION SYSTEM FOR DEVELOPING COUNTRIES (IN)
12. INTERNATIONAL FOOD AND AGRICULTURAL TRADE POLICY COUNCIL (US)
13. THE INSTITUTE FOR AGRICULTURAL MARKET STUDIES (RU)
14. SLOVENSKA POLNOHOSPODARSKA UNIVERSITA V NITRE (SLOVAK AGRICULTURAL UNIVERSITY IN NITRA) (SK)
15. INSTITUTE OF GEOGRAPHICAL SCIENCES AND NATURAL RESOURCES RESEARCH, CHINESE ACADEMY OF SCIENCES (CN)
16. THE UNIVERSITY OF SYDNEY (AU)
17. TSUNEHIRO OTSUKI (JP)
18. FUKUNARI KIMURA (JP)
19. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

OPTICHINA



Breeding to Optimise Chinese Agriculture

OPTICHINA (Breeding to Optimise Chinese Agriculture) aims to link the crop breeding research activities carried out by European and Chinese researchers. This Co-ordination Action build on previous and ongoing collaborative research experience of European and Chinese partners collaborating in this consortium. To date there have not been specific actions devoted to coordination of breeding research activities for better crop adaptation to abiotic stresses. Despite this European and Chinese scientists have been collaborating in a number of EC-funded research projects from 5th and 6th FP, together with other projects from specific EU member States, aimed at breeding the major grain crops for improved adaptation to abiotic stresses. OPTICHINA will focus specifically on research requirements to breeding for improved adaptation to abiotic stresses and sustainability of major herbaceous crops in both China and Europe. This require an integrative approach linking diverse disciplines and scales. This Co-ordination Action will integrate Chinese and European scientists internationally recognized as experts in different areas around crop breeding and adaptation to major abiotic stresses and avenues to raise yield potential. Coordinators and partners of different International Cooperation European projects together with Chinese researchers with high ranking of bilateral collaboration between China and Europe will actively participate.

The specific aims of the OPTICHINA initiative are:

- To support networks of European agricultural scientists working with China.
- To develop an inventory of experimental resources and datasets.
- To ensure adoption of existing knowledge and technology and the implementation of best practices.
- To fund short training visits of Chinese researchers in other laboratories
- To build links between research scientists working in molecular, genetic, bioinformatics and physiological, environmental research and the end users of their science.

FP7-KBBE-2010-4

EU-China Partnership initiative in plant breeding –
Mandatory China

OPTICHINA

www.ub.edu/optichinagriculture



PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

499,724.00

PROJECT N°

266045

DURATION

36 months

PROJECT START DATE

June 2011

LIST OF PARTNERS

1. UNIVERSITAT DE BARCELONA (ES)
2. ROTHAMSTED RESEARCH LIMITED (UK)
3. MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. (DE)
4. JOHN INNES CENTRE (UK)
5. UNIVERSIDAD DE LLEIDA (ES)
6. CHINESE ACADEMY OF AGRICULTURAL SCIENCES (CN)
7. CHINA AGRICULTURAL UNIVERSITY (CN)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

ORGANICDATANETWORK



Data network for better European organic market information

The project, Data network for better European organic market information, European Data Network for Improved Transparency of Organic Markets (OrganicDataNetwork) aims to increase the transparency of the European organic food market through better availability of market intelligence about the sector to meet the needs of policy makers and actors involved in organic markets.

This overall objective will be broken up into key objectives:

1. Bring together stakeholders and bodies actively involved in organic market data collection and publication and review the needs of end-users with respect to organic market data
2. Provide an inventory of relevant private and public bodies that are involved with the collection, processing and dissemination of organic market data in Europe
3. Classify existing methods of organic market data collection and develop criteria for quality improvement of available data
4. Collect, store in a common format and provide access to currently available data on organic markets in Europe
5. Develop and test common methodologies to assess the consistency of national data, with special reference to available data on trade flows
6. Test innovative approaches to improve the data collection and market reporting in six case study regions
7. Disseminate project results and develop recommendations including a code of practise for organic market data collection and network beyond the conclusion of the project

To achieve these objectives, OrganicDataNetwork includes as partners bodies (from 10-11 countries) that collect, publish and analyse such data. This network will closely co-operate with the EC, Eurostat and statistical offices of Member States, using existing structures for collecting and processing data on the organic market and stimulating the development of new ones by adapting existing models. The partnership will act as co-ordinating centre between stakeholders, and will result in a proposal for the establishment of a permanent network to achieve collaboration on statistical issues regarding organic market.

FP7-KBBE-2011-5

ORGANIC- DATANETWORK

Data network for better European organic
market information

www.organicdatanetwork.net



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

1,498,844.00

PROJECT N°

289376

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. UNIVERSITA POLITECNICA DELLE MARCHE (UPM) (IT)
2. FORSCHUNGSINSTITUT FUR BIOLOGISCHENLANDBAU STIFTUNG FIBL (CH)
3. ORGANIC RESEARCH CENTRE (ORC) - HAMSTEAD MARSHALL, BERKSHIRE (UK)
4. UNIVERSITAET KASSEL (UKS) (DE)
5. CESKA ZEMEDLSKA UNIVERZITA V PRAZE (CULS) (CZ)
6. ISTITUTO AGRONOMO MEDITERRANEO DI BARI (IAMB) (IT)
7. AGENCE FRANCAISE POUR LE DEVELOPPEMENT ET LA PROMOTION DE L'AGRICULTURE BIOLOGIQUE (ABIO) (FR)
8. AGRARMARKT INFORMATIONS-GESELLSCHAFT MBH (AMI) (DE)
9. ORGANIC-MARKET.INFO (BMI) (DE)
10. BIOCOP PRODUCTOS BIOLÓGICOS S.A. (BIOCOP) (ES)
11. ECOZEPT GBR (ECO) (DE)
12. MITTETULUNDUSUHING OKOLOOGILISTE TEHNOLOGIATE KESKUS (CEET) (EE)
13. INTERNATIONAL FEDERATION OF ORGANIC AGRICULTURE MOVEMENTS EUROPEAN UNION REGIONAL GROUP (IFOAM EU) (BE)
14. IMO-CONTROL SERTIFIKASYON TICARET LIMITED SIRKETI (IMO TR) (TR)
15. THE SOIL ASSOCIATION LIMITED (SA) (UK)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

PEGASUS



Public Perception of Genetically modified Animals - Science, Utility and Society

PEGASUS aims to provide policy support regarding the development, implementation and commercialisation of GM animals, and derivative foods. The results will contribute to the FP7 KBBE by integrating existing social, (including existing public perception) environmental and economic knowledge regarding GM animals. The use of GM in farmed animals (aquatic and terrestrial) will be reviewed. A foresight exercise will be conducted to predict future developments. Two case studies (1 aquatic, 1 terrestrial) will be applied to identify the pro's and con's of GM animals from the perspectives of the production chain (economics, agri-food sector) and the life sciences (human and animal health, environmental impact, animal welfare, sustainable production). Ethical and policy concerns will be refined through application of combined ethical matrix and policy workshops involving EU and non-EU stakeholders. The case studies will be used to demonstrate best practice in public engagement in the policy process. The activities will provide European policy support regarding GM animals and the foods derived from them, taking into account public perceptions, the competitiveness of EU animal production, and risk-benefit assessments linked with human and animal health, environmental impact, and sustainable production. A final stakeholder dissemination workshop will disseminate the results to the EU policy community.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

978,088.00

PROJECT N°

226465

DURATION

36 months

PROJECT START DATE

August 2009

LIST OF PARTNERS

1. UNIVERSITY OF NEWCASTLE UPON TYNE (UK)
2. UNIVERSITA DEGLI STUDI DI PARMA (IT)
3. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
4. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
5. KING'S COLLEGE LONDON (UK)
6. THE UNIVERSITY OF NOTTINGHAM (UK)
7. AGROBIOINSTITUTE (BG)
8. AGRIBIOTECH FOUNDATION (IN)
9. PERSEUS BVBA (BE)
10. INSTITUTE OF FOOD RESEARCH (UK)
11. UNIVERSITETET I BERGEN (NO)
12. WAGENINGEN UNIVERSITEIT (NL)

FP7-KBBE-2008-2B

PEGASUS



Exploring the pros & cons and the public
perception of GM animals

www.pegasus.wur.nl/UK



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

PRICE



Practical Implementation of Coexistence in Europe

Coexistence is still a controversial topic within the EU. Member States, farmers, and participants within the food chain have expressed an interest on the implications of different coexistence policies on costs, feasibility of achieving segregated supply chains, as well as implications for labeling and traceability. While a number of issues have already been addressed in previous projects, information about feasible and cost-effective coexistence measures at farm and supply chain level is still missing. PRICE will investigate the cost of coexistence practices in a number of Member States including the innovative solutions chosen by farmers to reduce coexistence compliance costs. A software module based on models resulting from previous projects (Co-Extra, SIGMEA) will be further developed with the aim to combine the natural science-based knowledge of cross pollination including biological containment methods at farm and regional level with solutions based on farmers' knowledge and experience with co-existence measures. The software module will be tested in the field, used to systematically analyze different strategies for achieving coexistence, and developed into a user-friendly decision-support tool for stakeholders (e.g. farmers, grain handlers). Implications for traceability and labeling at farm and regional level will also be assessed. The risk of adventitious presence of GM events in GMO-free commodities is also important within international supply chains of agricultural commodities. PRICE outlines several scenarios about the evolution of the global market of GMO-free commodities taking into account a number of important parameters (e.g. prices, compliance costs) supported by two detailed case studies. A wide range of stakeholders participate from the start of the project via an interactive stakeholder platform for securing the practical relevance of PRICE activities and the link with similar activities in the EU and worldwide.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,751.00

PROJECT N°

289157

DURATION

36 months

PROJECT START DATE

December 2011

LIST OF PARTNERS

1. TECHNISCHE UNIVERSITAET MUENCHEN (DE)
2. JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
3. JULIUS KUHN-INSTITUT BUNDESFORSCHUNGSINSTITUT FUR KULTURPFLANZEN (DE)
4. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
5. UNIVERSITA CATTOLICA DEL SACRO CUORE (IT)
6. SCHENKELAARS BIOTECHNOLOGY CONSULTANCY (NL)
7. UNIVERSITATEA DE STIINTE AGRONOMICI SI MEDICINA VETERINARA - BUCURESTI (RO)
8. THE UNIVERSITY OF READING (UK)
9. CESKA ZEMEDELSKA UNIVERZITA V PRAZE (CZ)
10. FUNDACIO MAS BADIA (ES)
11. GEOSYS SA (FR)
12. BUNDESAMT FUR VERBRAUCHERSCHUTZ UND LEBENSMITTELSICHERHEIT (DE)
13. INSTITUTO POLITECNICO DE SANTAREM (PT)
14. EIDGENOESSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT (CH)

FP7-KBBE-2011-5

PRICE

Feasible and cost-effective crop-specific coexistence measures, labelling, and traceability requirements

<http://price-coexistence.com/>



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

PRO AKIS



Prospects for Farmers' Support: Advisory Services in European AKIS

European farmers need topical knowledge, training and support to remain competitive and respond to manifold demands in a continuously evolving environment. Functioning agricultural knowledge and information systems (AKIS) are needed to tackle challenges like (i) giving small-scale farmers access to relevant and reliable knowledge, (ii) bridging scientific research topics and farmers' demands and (iii) offering appropriate support for diverse rural actors that form networks around innovations in agriculture and rural areas. Advisory services are one essential means to enhance problem solving, information sharing and innovation generating processes. In a functioning AKIS these services can be provided by various actors, among them formal extension services, training and post-secondary education bodies, NGOs but also by members of administration or research institutions. PRO AKIS will thoroughly review international literature sources on AKIS and provide an inventory of the AKIS institutions and interactions in the EU-27. Furthermore, PRO AKIS will highlight the mentioned challenges through a selection of case studies that are conducted for each topic in parallel in several member states. Comparative analyses and assessments of these cases will reveal successes, strengths and weaknesses of the specific knowledge flow systems. AKIS stakeholders and policy advisors will accompany PRO AKIS, share interim findings, and participate in workshops and seminars. They will be invited to intervene repeatedly in the project's course and to contribute through feedbacks and in assessments of results. On these bases policy recommendations for the strengthening of European agricultural innovation systems will be developed and further research needs will be designated. A range of dissemination activities will assure that findings are timely available for the interested communities and for the public at large.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

1,495,018.00

PROJECT N°

311994

DURATION

30 months

PROJECT START DATE

December 2012

LIST OF PARTNERS

1. LEIBNIZ-ZENTRUM FUER AGRARLANDSCHAFTSFORSCHUNG (ZALF) E.V. (DE)
2. THE JAMES HUTTON INSTITUTE LBG (UK)
3. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
4. UNIVERSIDADE DE TRAS-OS-MONTES E ALTO DOURO (PT)
5. UNIWERSYTET ROLNICZY IM. HUGONA KOLLATAJA W KRAKOWIE (PL)
6. AGRICULTURAL UNIVERSITY (BG)
7. VIDENCENTRET FOR LANDBRUG (DK)

FP7-KBBE-2012-6-singlestage

PRO AKIS



Agricultural Knowledge and Innovation
Systems for an inclusive Europe

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

QBOL



Development of a new diagnostic tool using DNA barcoding to identify quarantine organisms in support of plant health

Development of accurate identification tools for plant pathogens and pests is vital to support European Plant Health Policies. For this project Council Directive 2000/29/EC is important, listing some 275 organisms for which protective measures against introduction into and their spread within the Community needs to be taken. Those threats are now greater than ever because of the increases in the volumes, commodity types and origins of trade, the introduction of new crops, the continued expansion of the EU and the impact of climate change.

Currently identifying pathogens (in particular new emerging diseases) requires a staff with specialised skills in all disciplines (mycology, bacteriology, etc.); which is only possible within big centralised laboratory facilities. Taxonomy, phytopathology and other fields which are vital for sustaining sound public policy on phytosanitary issues are threatened with extinction.

Modern molecular identification/detection techniques may tackle the decline in skills since they often require much less specialist skills to perform, are more amenable for routine purposes and can be used for a whole range of different target organisms. Recently DNA barcoding has arisen as a robust and standardised approach to species identification. QBOL wants now to make DNA barcoding available for plant health diagnostics and to focus on strengthening the link between traditional and molecular taxonomy as a sustainable diagnostic resource.

Within QBOL collections harbouring plantpathogenic Q-organisms will be made available. Informative genes from selected species on the EU Directive and EPPO lists will be DNA barcoded from vouchered specimens. The sequences, together with taxonomic features, will be included in a new internet-based database system. A validation procedure on developed protocols and the database will be undertaken across worldwide partners to ensure robustness of procedures for use in a distributed network of laboratories across Europe.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,991,433.00

PROJECT N°

226482

DURATION

42 months

PROJECT START DATE

March 2009

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
3. VLAAMS GEWEST (BE)
4. UNIVERSITEIT GENT (BE)
5. EIDGENÖSSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT (CH)
6. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
7. AARHUS UNIVERSITET (DK)
8. ALMA MATER STUDIOIUM-UNIVERSITA DI BOLOGNA (IT)
9. KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN - KNAW (NL)
10. INTERNATIONAL POTATO CENTER (PE)
11. PLANTENZIEKTENKUNDIGE DIENST (NL)
12. NACIONALNI INSTITUT ZA BIOLOGIJO (SI)
13. STÁTNÍ ROSTLINOLÉKAŘSKÁ SPRÁVA (CZ)
14. MINISTÈRE DE L'AGRICULTURE ET DE LA PÊCHE (FR)
15. CHINESE ACADEMY OF INSPECTION AND QUARANTINE (CN)
16. LINCOLN UNIVERSITY (NZ)
17. EMPRESA BRASILEIRA DE PESQUISA AGROPECUARIA (BR)
18. UNIVERSITÀ DEGLI STUDI DI MODENA E REGGIO EMILIA (IT)
19. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
20. STELLENBOSCH UNIVERSITY (ZA)

FP7-KBBE-2008-2B

QBOL



Development of new diagnostic methods in support of Plant Health policy

www.qbol.org



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

QDETECT



Developing quarantine pest detection methods for use by national plant protection organizations (NPPO) and inspection services

Detection methods are the first tools used by national plant protection organisations (NPPO) and inspection services in order to find incursions of quarantine plant pathogens or pests (Q-pests) across a border, a crucial step to implement Council Directive 2000/29/EC. This is often done visually in the first instance, with support from a laboratory for confirmatory testing and subsequent monitoring. Reliance on laboratory testing causes significant delays when action is only taken on the return of results from the laboratory to which the samples were sent. Thus, there is a real need for rapid, simple and robust detection methods that can be deployed by NPPOs in the field with inspection services to enable early detection of Q-pests. The Q-detect consortium aims to develop detection methods based on biochemical (detecting volatile organic compounds [VOC] and nucleic acid), acoustic (including resonance), remote imaging (incorporating spectral and automated data analysis) and pest trapping (insect pests and pathogen vectors) techniques. The careful selection of traded products (primarily potato and forestry/trees) ensures the methods will be developed on high priority targets for the EU such as the pine wood nematode (*Bursaphelenchus xylophilus*), potato brown rot (*Ralstonia solanacearum*) and potato ring rot (*Clavibacter michiganensis* ssp. *Sepedonicus*), Asian longhorn beetle (*Anoplophora glabripennis*) and a range of whitefly transmitted viruses. The diversity of targets enables the Q-detect consortium to work on suites of complementary techniques; this is of particular importance since the diverse range of targets listed in Directive 2000/29/EC means no single detection method will be suitable for all Q-pests. Critically, NPPOs and third country institutes are partners, which will enable testing, and validation of methods at real outbreak sites where these are absent in the EU. SME partners ensure access to technology and routes for exploitation after the project ends.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,995,918.00

PROJECT N°

245047

DURATION

36 months

PROJECT START DATE

March 2010

LIST OF PARTNERS

1. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
2. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
3. NACIONALNI INSTITUT ZA BIOLOGIJO (SI)
4. EIDGENOESSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT (CH)
5. SCIENCE AND TECHNOLOGY FACILITIES COUNCIL (UK)
6. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
7. STICHTING KATHOLIEKE UNIVERSITEIT (NL)
8. BUNDESFORSCHUNGS-UND AUSBILDUNGSZENTRUM FÜR WALD, NATURGEFAHREN UND LANDSCHAFT (AT)
9. UNIVERSITA DEGLI STUDI DI PADOVA (IT)
10. CENTRO INTERNACIONAL DE LA PAPA (PE)
11. CHINESE ACADEMY OF INSPECTION AND QUARANTINE (CN)
12. Q-LINEA AB (SE)
13. SENSOR SENSE B.V. (NL)
14. OPTISENSE LIMITED (UK)

FP7-KBBE-2009-3

QDETECT



Development of detection methods for quarantine plant pests and pathogens for use by Plant Health Inspection Services

<http://qdetect.org>



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

REPHRAME



Development of improved methods for detection, control and eradication of pine wood nematode in support of EU Plant Health policy

Europe's pine forests are a valuable economic, social and environmental resource under threat from the introduction of the pine wood nematode (PWN), *Bursaphelenchus xylophilus*. Although not a pest in its native North America, PWN has devastated forests in Asia. Since the arrival of PWN in Portugal, the native maritime pine, *Pinus pinaster*, has proved to be extremely susceptible, with PWN being spread by the local longhorn beetle *Monochamus galloprovincialis*. Previous studies have shown that PWN could spread throughout the Iberian peninsula and beyond, making it a major threat to European forests.

Effective containment and eventual eradication of PWN demands a detailed understanding of the behaviour and dynamics of PWN in infested trees, especially because delayed onset of symptoms (latency) reduces survey accuracy and can compromise containment strategies. Research will be carried out into vector dispersal capacity; improved ways to monitor and reduce populations using synthetic chemical lures will be investigated; the potential for PWN transfer between trees in the absence of the *Monochamus* spp. vectors will be evaluated, as will the introduction of resistant conifers. Crucially, the project will extend the capability of existing models to identify the risk posed by PWN to the rest of Europe and the possible impact of climate change on its spread.

The REPHRAME project brings together Europe's leading experts on PWN, together with colleagues from around the world, to address the key gaps in current knowledge. As well as providing a scientific basis for governmental action to deal with PWN, the results of the project will be synthesised into a user-friendly toolkit so that workers on the ground can put them to immediate use. The project also includes extensive dissemination activities to ensure the uptake and application of results across the EU and world-wide.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,997,938.00

PROJECT N°

265483

DURATION

36 months

PROJECT START DATE

March 2011

LIST OF PARTNERS

1. FORESTRY COMMISSION RESEARCH AGENCY (UK)
2. UNIVERSITY OF GREENWICH (UK)
3. BUNDESFORSCHUNGS-UND AUSBILDUNGSZENTRUM FÜR WALD, NATURGEFAHREN UND LANDSCHAFT (AT)
4. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
5. JULIUS KUHN INSTITUT BUNDESFORSCHUNGSINSTITUT FÜR KULTURPFLANZEN (DE)
6. INSTITUTO NACIONAL DE RECURSOS BIOLÓGICOS I.P. INRB (PT)
7. UNIVERSIDADE DE EVORA (PT)
8. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS (ES)
9. UNIVERSIDAD DE VALLADOLID (ES)
10. INSTITUTE OF ZOOLOGY, CHINESE ACADEMY OF SCIENCES (CN)
11. NORWEGIAN INSTITUTE FOR AGRICULTURAL AND ENVIRONMENTAL RESEARCH - BIOFORSK (NO)

FP7-KBBE-2010-4

REPHRAME

Analysis of the potential of the pine wood nematode (*Bursaphelenchus xylophilus*) to spread, survive and cause pine wilt in European coniferous forests in support of EU plant health policy

www.forestry.gov.uk/fr/INFD-8TFDR6



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

RTD2FARM



Enhancing collaboration in research for Livestock

RTD2Farm has a simple, yet effective strategy to increase the uptake of RTD Results by livestock farmers.

RTD2Farm will be involving the three main players of the process; RTD providers (Research centres, Universities, Industry, etc), Technology Transfer experts (Networking and Training Organisations) and Farmers (End Users).

RTD2Farm will analyse methods for knowledge and technology transfer, define Best Practice, and spread these. RTD2Farm has concentrated on pig farms, as they are the main animal for meat production in the EU. The process to optimise Knowledge and Technology Transfer should be transferable to other species, as the main Technologies are similar: Feed, Breeding and Farm management. Obviously there will be differences in the technologies, but the Knowledge and technology Transfer methods will be similar.

Three regions have been selected to represent the diversity of Livestock farms in the EU. Benelux has a similar "farm landscape" (farm size and production techniques), covers a small area and has a high uptake of new knowledge and technologies (K&T). Austria has a very diverse farming landscape, with a very diverse uptake of K&T. Italy has more small farms where dissemination of K&T is especially challenging.

T&K Transfer from Universities has the air of being slow. Of course T&K Transfer by Industry is much more efficient, as the research itself is more consumers oriented. For this reason we have included both UNI and IND partners as RTD Providers in the RTD2Farm consortium.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

985,405.00

PROJECT N°

265661

DURATION

24 months

PROJECT START DATE

June 2011

LIST OF PARTNERS

1. VETERINAERMEDIZINISCHE UNIVERSITAET WIEN (AT)
2. ENCO SRL (IT)
3. NUTRITION SCIENCES NV (BE)
4. LEBENSMITTELVERSUCHANSTALT (AT)
5. CENTRO RICERCA PRODUZIONI ANIMALI - C.R.P.A. S.P.A. (IT)
6. RATTLELOW SEGHERS HOLDING NV (BE)
7. CAMPO BO' SOCIETA SEMPLICE AGRICOLA (IT)
8. DI ANDREAS MOSER RTD SERVICES -RTDS (AT)
9. VERBAND OESTERREICHISCHER SCHWEINEBAUERN VEREIN (AT)
10. VERENIGING VARKENSHOUDERS - VEVA (BE)
11. EUTEMA TECHNOLOGY MANAGEMENT GMBH & CO KG (AT)

FP7-KBBE-2010-4

RTD2FARM

Sharing best practice and enhancing European collaboration on research, knowledge transfer and innovation in farm animal sciences

www.rtd2farm.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

RUDI



Assessing the Impact of Rural Development Policies

The RuDI study will provide a thorough analysis of the process of design and delivery of EU Rural Development Policy (incl. LEADER). The study combines quantitative and qualitative approaches starting with a critical review of the state-of-the-art in RD theory and the conceptual frameworks and approaches used in RD policy evaluation. In the study the Common Monitoring and Evaluation Framework (CMEF) and the underlying intervention and impact logics will be critically examined. The positive and negative effects of rural development policies on institutional, social, economic and environmental level will be identified and described in a set of carefully selected and framed case studies. The impact assessment will also include those that have not been anticipated. The case studies will be representative of the structural differences that can be found in the characteristics of rural areas across all EU member states. Focus will be on different types and characteristics of territory, interrelations with RD programme priorities and measures, and an assessment of their 'hard' and 'soft' impacts. The comparative analysis of case study results synthesis will provide a better understanding of driving forces in policy design, the strengths and weaknesses of different delivery and governance models, the positive and negative effects of RD policies and, most importantly, a more convincing conceptual and methodological framework for evaluating RD policy. Consultations with RD policy actors and evaluators will ensure that the analyses are closely coordinated with the demands and possibilities of practitioners. The RuDI study will be concluded with recommendations for a more appropriate RD policy design, delivery, impact monitoring and assessment.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,517,863.00

PROJECT N°

213034

DURATION

33 months

PROJECT START DATE

February 2008

LIST OF PARTNERS

1. INSTITUT FUER LAENDLICHE STRUKTURFORSCHUNG AN DER JOHANN WOLFGANG GOETHE UNIVERSITAET, FRANKFURT AM MAIN (DE)
2. UNIVERSITY OF GLOUCESTERSHIRE (UK)
3. ISTITUTO NAZIONALE DI ECONOMIA AGRARIA (IT)
4. WAGENINGEN UNIVERSITEIT (NL)
5. ARISTOTELIO PANEPISTIMIO THESSALONIKIS (EL)
6. BUNDESANSTALT FUER BERGBAUERNFRAGEN (AT)
7. UNIVERZA V LJUBLJANI (SI)
8. NORDREGIO (SE)
9. MITTTELUNDUSUHING OKOLOOGILISTE TEHNOLOGIATE KESKUS (EE)
10. USTAV ZEMEDEL'SKE EKONOMIKY A INFORMACI (CZ)

FP7-KBBE-2007-1

RUDI



Assessing the impact of rural development policies
(including Leader)

www.rudi-europe.net



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

RURALJOBS



New Sources of Employment to Promote the Wealth-Generating Capacity of Rural Communities

RuralJobs will quantify the employment needs and potentials in different typologies of pilot areas within contrasting reference areas in six EU countries, evaluating the effectiveness of past and current policies in addressing these needs and potentials, and by systematic analysis of the results, providing guidelines on the better targeting of future rural development measures.

The main objective is to provide a clearer understanding of the factors influencing the employment potentials of different typologies of rural areas to support the future evolution of rural development policies. This will be backed up by the identification of good practice and a support network for implementation.

The consortium consists of eight partners, one from each of Bulgaria, France, Hungary, Italy, Lithuania, Romania, Spain and UK.

The seven work packages are:

- WP1. Project management
- WP2. Assessment of labour market policies and programmes
- WP3. Assessment methodologies and indicators
- WP4. Typology for regions
- WP5. New strategies for employment in pilot areas
- WP6. Synthesis of recommendations
- WP7. Dissemination and technical assistance for mainstreaming

The beneficiaries will include policy makers at EU, national and regional levels, rural development practitioners including public sector agencies, SMEs and trade groups, NGOs etc. and academics.

The deliverables will be: reports on past and current policies and programmes, assessment methodologies, rural typologies, labour market scenarios for pilot areas and regional foresight scenarios; a synthesis of recommendations for future rural development strategies, four regional conferences/workshops; a two-day international conference in Brussel; academic publications; training materials and a website.

The sustainable outcome of RuralJobs will be the greater capacity of actors to better target rural development measures, supported by the RUR@CT network and reference area reports on mainstreaming good practice.

FP7-KBBE-2007-1

New sources of employment in rural areas

RURALJOBS

www.region-limousin.fr/ruraljobs



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

1,197,104.00

PROJECT N°

211605

DURATION

33 months

PROJECT START DATE

February 2008

LIST OF PARTNERS

1. DEBRECENI EGYETEM (HU)
2. UNIVERSITATEA BABES BOLYAI (RO)
3. LIETUVOS ZEMES UKIO UNIVERSITETAS (LT)
4. CONSEJERIA DE AGRICULTURA Y PESCA - JUNTA DE ANDALUCIA (ES)
5. CONSEIL REGIONAL DE LIMOUSIN (FR)
6. INSTITUTE OF AGRICULTURAL ECONOMICS (BG)
7. INIPA - ISTITUTO NAZIONALE ISTRUZIONE PROFESSIONALE AGRICOLA (IT)
8. UNIVERSITY OF PLYMOUTH (UK)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

SAT-BBE



Systems Analysis Tools Framework for the EU Bio-Based Economy Strategy

SAT-BBE brings together a project team of internationally recognised and respected researchers in bio-based economy and sustainability at the European and global levels. During the two and a half years planned for the project, the project team will develop a systems analysis tools framework using their broad experience of modelling the economy in the perspective of bio-based and sustainability objectives. A systems analysis tools framework has the purpose to understand the functional requirements of a bio-based economy and to measure the necessary extent for transformation of the economy as a whole (as may be limited by national and regional administrative boundaries, but as existing within the global economy by default) to a bio-based foundation. Systems analysis implies the capacity to understand relations between parts, and the nature of both the parts and their relationships. Tools are modelling and non-modelling analytical methods, organised in evaluation (and, by extension, monitoring) methodologies. Data requirements and indicators are designed according to the inputs required, and the outputs desired, for the type of analyses intended. The design of links between tools and their access by non-specialists is also a project objective.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

495,655.00

PROJECT N°

311880

DURATION

30 months

PROJECT START DATE

October 2012

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. UNIVERSITEIT UTRECHT (NL)
3. EUROPEAN FOREST INSTITUTE (FI)
4. WUPPERTAL INSTITUT FÜR KLIMA, UMWELT, ENERGIE GMBH. (DE)
5. JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FÜR LÄNDLICHE RAUME, WALD UND FISCHEREI (DE)
6. INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE - IFPRI (US)
7. VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG (NL)
8. INTERNATIONALES INSTITUT FÜR ANGEWANDTE SYSTEMANALYSE (AT)

FP7-KBBE-2012-6-singlestage

SAT-BBE



Design of a systems analysis tools framework for the EU bio-based economy strategy

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

SHARCO



Sharka Containment

SharCo is aimed at helping the EU face the accession of Member States known as endemic of sharka disease by providing the EU with tools such as marker-assisted selection, PPV resistant plant materials, guidelines, warning systems, decision-support system. On that purpose, the project will, in the field of epidemiology, identify driving factors of PPV spread and diversification and develop novel and highthrough-put detection systems warning sharka outbreaks. In the field of genetics, it will provide molecular markers for the implementation of marker assisted selection of PPV resistant fruit varieties. In the field of biology, we will assess innovative biotechnological approaches to broaden resistance to PPV in different fruit tree species. Finally, in order to develop a PPV outbreak management, we will elaborate i) guidelines for endusers and policy makers concerning cultivation and risk management, ii) an early warning system coupled with a decision support system. All knowledge and tools developed by the project will be widely disseminated all over Europe with special attention made to PPV endemic countries.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,935,674.00

PROJECT N°

204429

DURATION

54 months

PROJECT START DATE

March 2008

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. AGROBIOINSTITUTE (BG)
3. UNIVERSITATEA DE STIINTE AGRONOMIC SI MEDICINA VETERINARA - BUCURESTI (RO)
4. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
5. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
6. INSTITUTO VALENCIANO DE INVESTIGACIONES AGRARIAS (ES)
7. INSTYTUT OGRODNICTWA (PL)
8. MUSTAFA KEMAL UNIVERSITY (TR)
9. VYZKUMNY USTAV ROSTLINNE VYROBY (CZ)
10. TECHNISCHE UNIVERSITAET MUENCHEN (DE)
11. VIROLOGICKY USTAV SLOVENSKEJ AKADEMIE VIED (SK)
12. INSTITUT ZA VOCARSTVO (RS)
13. INSTITUT PO OVOSHSTARSTVO-PLOVDIV (BG)
14. UNIVERSITA DEGLI STUDI DI MILANO (IT)
15. MENDELOVA UNIVERZITA V BRNE (CZ)
16. STATIUNEA DE CERCETARE-DEZVOLTARE PENTRU POMICULTURA BISTRITA (RO)

FP7-KBBE-2007-1

Containment of Sharka virus in view of EU-expansion

SHARCO

www.sharco.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

SOLINSA



Agricultural Knowledge Systems in Transition: Towards a more effective and efficient support of Learning and Innovation Networks for Sustainable Agriculture

RESEARCH OBJECTIVES

The overall objective of this project is to identify effective and efficient approaches for the support of successful LINSA (Learning and Innovation Networks for Sustainable Agriculture) as drivers of transition towards Agricultural Innovation Systems for sustainable agriculture and rural development.

In order to achieve this objective the project will:

- Explore LINSAs empirically as bottom-up drivers of transition
- Improve understanding of barriers to complex learning processes and developing recommendations on how to avoid / remove them
- Create open learning spaces for actors outside the project by sharing and disseminating project findings
- Identify institutional determinants that enable or constrain existing AKS in supporting effective LINSAs in the context of changing knowledge and innovation policies
- Develop a conceptual framework for innovation for sustainable agriculture and rural development.

TOPICS

The study will be carried out in 3 fields: (a) consumer oriented networks (b) non-food oriented networks and (c) purely agricultural networks or networks for sustainable land use

Strategic objectives

- Contributing to more effective research-practice linkages in the complex innovation and value chains.
- Contributing to a policy framework for innovation in agriculture.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,493,998.00

PROJECT N°

266306

DURATION

36 months

PROJECT START DATE

February 2011

LIST OF PARTNERS

1. FORSCHUNGSINSTITUT FÜR BIOLOGISCHENLANDBAU STIFTUNG (CH)
2. UNIVERSITÀ DI PISA (IT)
3. UNIVERSITY OF GLOUCESTERSHIRE (UK)
4. UNIVERSITY OF THE WEST OF ENGLAND, BRISTOL (UK)
5. WAGENINGEN UNIVERSITEIT (NL)
6. DEVELOPPEMENT DE L'AGRICULTURE ET DE L'ESPACE RURAL : AGRIDEA (CH)
7. EIDGENÖSSISCHE TECHNISCHE HOCHSCHULE ZÜRICH (CH)
8. NODIBINAJUMS BALTIC STUDIES CENTRE (LV)
9. INSTITUT DE L'ELEVAGE (FR)
10. UNIVERSITÄT HOHENHEIM (DE)
11. MAGYAR TUDOMÁNYOS AKADEMIA KOZGAZDASÁGTUDOMÁNYI INTÉZET (HU)

FP7-KBBE-2010-4

SOLINSA

Knowledge systems for farming in the context of sustainable rural development

www.solinsa.net



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

SPARD



Spatial Analysis of Rural Development Measures

The aim of the SPARD project is to develop a modelling tool that will help policy-makers to understand the causal relationships between rural development measures and their results in a spatial dimension. Based on spatial-econometric analysis it will include ex-post evaluation options and the extension to ex-ante assessment with the purpose of giving support to the planning of targeted RD policies, programmes and measures. The project will compile a well-structured database, to organise both indicators from the Common Monitoring and Evaluation Framework (CMEF), distinguishing input, output, result, impact and baseline indicators, and other data specifically used by the RD management authorities in the Member States (MS), and extrapolate missing indicator values. This requires a procedure to standardize the utilisation of results amongst users at different levels. The emphasis of the project will be the development of an analytical framework that considers characteristics and needs of target areas and target groups. The key task of the project is to develop a quantitative model, using spatial econometric modelling. This will allow the identification of causal relationships of RD policy implementation. In this manner the cost-effectiveness of RDPs can be analysed in their spatial dimension. Evaluations/ assessments of selected policies and measures and their impacts will be made at the EU-27 scale. Furthermore it shall be demonstrated that the methodology is feasible at different scales of application and levels of data aggregation. Validation of the modelling framework will be carried out in 5 case study regions. The end product of SPARD will be a multiple-option and variable-scale DSS tool capable for use in horizontal and vertical evaluations. As a collaborative project, SPARD will make efforts to broaden the proved expertise of the consortium by integration of stakeholders, external experts and end-users in the overall process.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

1,910,590.00

PROJECT N°

244944

DURATION

36 months

PROJECT START DATE

April 2010

LIST OF PARTNERS

1. LEIBNIZ-ZENTRUM FUER AGRARLANDSCHAFTSFORSCHUNG (ZALF) E.V. (DE)
2. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
3. ALMA MATER STUDIOURUM-UNIVERSITA DI BOLOGNA (IT)
4. AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH (AT)
5. VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG (NL)
6. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
7. THE UNIVERSITY OF EDINBURGH (UK)
8. UNIVERZA V LJUBLJANI (SI)
9. JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)

FP7-KBBE-2009-3

SPARD

Spatial analysis of rural development measures for effective targeting of rural development policies

www.spard.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

SUPURBFOOD



Towards sustainable modes of urban and peri-urban food provisioning

Short food supply chains have been advocated as a means of rural development, as they improve the position of primary producers in the value chain. In this proposal we look at short supply chains from the perspective of urban rather than rural development. Short supply chains can play a role in addressing urban problems such as climate change, obesity, storm water control, etc.

Short food supply chains have been advocated as a means to reduce CO₂ impact of the agricultural system. Although a reduction of food miles certainly contributes to reducing climate impact, this proposal takes as premise that to really improve the ecological performance of the food system other flows of goods and services need to be shortened as well (e.g. nutrient, water, and carbon cycles need to be closed). In the current context these aspects are usually treated separately, this proposal argues to treat them more integrated.

The research will analyse the way in which several European city regions deal with short supply chains in food, nutrients, water, and carbon. The project will facilitate selected SMEs to further innovate in food production and delivery, nutrient and water management, and multifunctional use of space, and will disseminate the results among a wider audience of SMEs. By doing so, the research will look beyond the state of the art, it will suggest how city regions could look like if they chose to further relocalise their food system.

Finally the project will also establish links with stakeholders and RTD activities regarding urban and peri-urban agriculture and short chain delivery of food in urban and peri-urban areas in developing countries. This will be organised through a process of dialogue, sharing of experiences, exchanging of best practices and joint learning.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

1,499,707.00

PROJECT N°

312126

DURATION

36 months

PROJECT START DATE

October 2012

LIST OF PARTNERS

1. WAGENINGEN UNIVERSITEIT (NL)
2. ASSOCIAZIONE ITALIANA PER L AGRICOLTURA BIOLOGICA* AIAB (IT)
3. UNIVERSITEIT GENT (BE)
4. UNIVERSIDAD DE VIGO (ES)
5. UNIVERSITY OF GLOUCESTERSHIRE (UK)
6. UNIVERSITY OF THE WEST OF ENGLAND, BRISTOL (UK)
7. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
8. FORSCHUNGSINSTITUT FUR BIOLOGISCHENLANDBAU STIFTUNG (CH)
9. NODIBINAJUMS BALTIC STUDIES CENTRE (LV)
10. STICHTING INTERNATIONAL NETWORK OF RESOURCE CENTRES ON URBAN AGRICULTURE AND FOOD SECURITY (NL)
11. F3 CONSULTANTS CO-OPERATIVE CIC (UK)
12. STICHTING UIT JE EIGEN STAD (NL)
13. MASCHINENRING PLUS AG (CH)
14. COMUNIDAD DE MONTES VECINALES EN MANO COMUN DE VINCIOS (ES)
15. WILLEM&DREES BV (NL)
16. PICO BIO AG (CH)
17. AGRICOLTURA NUOVA SOCIETA COOPERATIVA SOCIALE AGRICOLA INTEGRATA (IT)
18. ROOMER BVBA (BE)
19. THE COMMUNITY FARM LIMITED (UK)
20. SABIEDRIBA AR IEROBEZOTU ATBILDIBUKALNCIEMA IELA KQ (LV)

FP7-KBBE-2012-6-singlestage

SUPURBFOOD



Short chain delivery of food for urban-peri-urban areas

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

SUSTAINMED



Sustainable agri-food systems and rural development in the Mediterranean Partner Countries

The overall objective of the SUSTAINMED project is to examine and assess the impacts of EU and national agricultural, rural, environmental and trade policies in the Mediterranean Partner Countries (MPCs). Specific impacts include socio-economic structural changes, income distribution, resource management, trade liberalisation, poverty alleviation, employment and migrations trends, as well as commercial relations with major trade partners (in particular the EU) and competitiveness in international markets.

The project will integrate a wide range of complementary methods and analytical tools including quantitative modelling, structured surveying, indicator building and qualitative data analysis, in order to provide (i) orders of magnitude of the impact in MPCs related to changes in important policy parameters, and (ii) qualitative insights into processes which will be important for the future welfare of MPCs but which cannot be fully captured by quantitative indicators. The project results will enable the EU Commission and relevant stakeholders to formulate realistic policies and action plans aimed at supporting sustainable agri-food systems, rural development programmes and capacity building in the Mediterranean region. The project outcomes will also contribute to improve collaboration and economic and commercial relations between the EU and target MPCs, in line with the stated goals of the Barcelona Process: Union for the Mediterranean. Furthermore, the project will provide relevant research to support the promotion of sustainable development to fulfilling the EU's commitment towards the United Nation Millennium Development Goals in the region.

The project consortium brings together during three years recognised researchers from six EU Member countries, one Associate country and five Mediterranean Partner countries, with a strong scientific background and experience in Mediterranean policy, market and institutional analysis.

FP7-KBBE-2009-3

SUSTAINMED



European
Commission

Policy and institutional aspects of sustainable agriculture, forestry and rural development in the Mediterranean partner countries – SICA (Mediterranean Partner Countries)

<http://sustainmed.iamm.fr>



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

1,996,771.00

PROJECT N°

245233

DURATION

36 months

PROJECT START DATE

March 2010

LIST OF PARTNERS

1. CENTRE INTERNATIONAL DES HAUTES ETUDES AGRONOMIQUES MEDITERRANEENNES INSTITUT AGRONOMIQUE MEDITERRANEEN DE MONTPELLIER (FR)
2. ECOLE NATIONALE D'AGRICULTURE DE MEKNES (MA)
3. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
4. INSTITUT NATIONAL AGRONOMIQUE DE TUNISIE (TN)
5. UNIVERSITY OF KENT (UK)
6. MEDITERRANEAN AGRONOMIC INSTITUTE OF CHANIA (EL)
7. PELLERON TALOUDELLISEN TUTKIMUSLAITOKSEN KANNATUSYHDISTYS RY (FI)
8. UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II. (IT)
9. MINISTRY OF AGRICULTURE AND AGRARIAN REFORM (SY)
10. UNIVERSIDAD POLITECNICA DE VALENCIA (ES)
11. ZAGAZIG UNIVERSITY (EG)
12. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
13. AKDENIZ UNIVERSITY (TR)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

TAPSIM



Trade, Agricultural Policies and Structural Changes in India's Agrifood System; Implications for National and Global Markets

The project offers a qualitative and quantitative analysis of future developments in Indian supply, demand and trade for the main agricultural commodities as well as developments in the food value chain. Working tools are improved and used to evaluate the impact of trade and agricultural policies, structural changes on the Indian agrifood system as well as on world markets.

More specifically, the project will include the following actions:

- Design of an analytical framework for the analysis of future trade and agricultural policy developments (including trade agreements) on supply, demand and trade for the main agricultural commodities in India. Initial suggestions for analysis are cereals, pulses, vegetable oils, cotton, sugar, dairy, meat and fish, fruits and vegetables.
- Identify the key processes of change in the Indian and global economy and their impacts on the agrifood sector of India. This serves as a basis for understanding future trends.
- Update, test and improve modelling tools and value chain analysis that will be used as building blocks in this project.
- Define indicators and develop databases for understanding and forecasting the impacts of policies on future developments of agriculture in India up to 2020. This will be done at regional and national levels, taking into account international trade.
- Implementation of tools to simulate the impacts of domestic and international trade policy changes and structural changes in the agrifood sector on the Indian agricultural sectors as well as on world markets, with a specific focus on the EU.
- Dissemination of our findings and interaction with the research and policy community, as well as the key stakeholders in the agrifood sector, both in India and the EU.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

1,349,500.00

PROJECT N°

212617

DURATION

49 months

PROJECT START DATE

September 2008

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
3. INTERNATIONAL FOOD POLICY RESEARCH ORGANISATION (IN)
4. CENTRO RICERCHE PRODUZIONI ANIMALI - C.R.P.A. S.P.A. (IT)
5. INDIRA GANDHI INSTITUTE OF DEVELOPMENT RESEARCH (IN)
6. LEIBNIZ INSTITUT FUER AGRARENTWICKUNG IN MITTEL- UND OSTEUROPA (DE)

FP7-KBBE-2007-1

Trade and agricultural policies - India

TAPSIM

www.tapsim.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

TEAMPEST



Theoretical Developments and Empirical Measurement of the External Costs of Pesticides

Pesticides are defined as chemical substances protecting plants from pathogens, insects, nematodes and weeds. They are used to secure yields, improve quality of food and facilitate harvesting. However, their heavy use in agriculture resulted in pest resistance, ground, surface and water contamination as well as possible health problems on farmers/operators and consumers. Within this context, the objective of the proposed research stems from the need to provide a solid methodological framework and empirical evaluation which will assist policymakers in identifying the true impact of pesticides on agricultural production. The obtained results may well serve as a benchmark for the foundation of future EU policy schemes aiming at achieving a sustainable use of pesticides in European agriculture. In this respect, the proposed project intends to provide an accurate assessment of the external costs of agricultural pesticide use and contribute to the relevant EU policies by developing tools for designing a socially optimal tax and levy scheme aimed at the reduction of pesticide use to its socially optimal level. Specific consideration will be given to the effects of the accrued scheme and alternative policy tools on the socially optimal pesticide use, as well as on economic sustainability and social welfare. Moreover, the proposed research will identify means that can help in the promotion of more integrated pesticide management practices. The project fulfils its aims by combining traditional and well-established theoretical methodologies with the most recent advancements in economic theory, biological and technical scientific work, ultimately developing a consistent and integrated analytical framework. The validity of the employed theoretical models and policy tools will be extensively verified by applying them in selected EU countries, thereby accounting for the diversity in pesticide use among producers in different geographical locations.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,266,380.00

PROJECT N°

212120

DURATION

36 months

PROJECT START DATE

May 2008

LIST OF PARTNERS

1. ARISTOTELIO PANEPISTIMIO THESSALONIKIS (EL)
2. UNIVERSITY OF CRETE (EL)
3. WAGENINGEN UNIVERSITEIT (NL)
4. SVERIGES LANTBRUKSUNIVERSITET (SE)
5. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (INRA) (FR)
6. ABERYSTWYTH UNIVERSITY (UK)
7. PANEPISTIMIO KYPROU (CY)
8. INSTITUTO NACIONAL DE RECURSOS BIOLÓGICOS I.P. INRB (PT)
9. UNIVERSITY OF NATIONAL AND WORLD ECONOMY (BG)
10. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

FP7-KBBE-2007-1

External costs of pesticides

TEAMPEST

www.eng.auth.gr/mattas/teampest



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

TREAT&USE



Safe and efficient treatment and reuse of wastewater in agricultural production schemes

The TREAT&USE project aims to bring together 6 European SMEs and one RTD to prove and disseminate the technical and economic viability of a method for safe and economic wastewater treatment that allows a direct reuse of the water and nutrients in agricultural production with minimal operational and maintenance costs.

TREAT&USE is based on the outcomes of two successful finished EU research projects: PURATREAT and WACOSYS on wastewater treatment, reuse technologies and fertigation systems. The produced technical and scientific results of both projects were excellent and very promising in terms of energy and cost efficiency. The most promising MBR system developed in PURATREAT run successfully with reduced energy consumption (90% less than RO). The tested MBR lab-prototypes generated an effluent not suitable for drinking water but an excellent source for irrigation and fertilization purposes (rich on nutrients such as N and P and free of pathogens). In WACOSYS, the application of wastewater in agricultural production schemes has been successfully applied and monitored. Based on these valuable outcomes, within TREAT&USE is planned to construct and implement a pre-commercial prototype unit which combines the treatment of substantial amounts of communal wastewater in an up scaled MBR system and the safe application of the effluent as irrigation and fertilization water in agricultural production schemes.

The tailor-made MBR effluent will be applied directly for irrigating and fertilizing fruit trees and vegetables in commercial agricultural production site in Southern Spain.

To measure the performance and the reliability of the approach, the pre-commercial prototype will include a feedback and control unit based on soil sensors. Therefore, the gained knowledge and tools of PURATREAT and WACOSYS will be further specified, applied and demonstrated in praxis and developed to direct market applications.

The participating SMEs have already developed business plans.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

999,858.00

PROJECT N°

311943

DURATION

30 months

PROJECT START DATE

June 2012

LIST OF PARTNERS

1. BIOAZUL (ES)
2. HYDRO-AIR INTERNATIONAL IRRIGATION SYSTEMS GMBH (DE)
3. ISITEC GMBH (DE)
4. PESSL INSTRUMENTS GMBH (AT)
5. SOIL MOISTURE SENSE LTD (UK)
6. VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. (DE)
7. GUADALHORCE ECOLOGICO S COOP AND (ES)

FP7-KBBE-2012-6-singlestage

TREAT&USE

Boosting the translation of FP projects' results into innovative applications in the field of agriculture, forestry, fisheries and aquaculture

www.treatanduse.eu





ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

ULYSSES

Understanding and coping with food markets volatility towards more Stable World and EU food Systems

The literature published in the last 3 years trying to explain agricultural markets instability during 2007-2009 offers inconclusive results about its causes and impacts. On balance, available scientific evidence gives insufficient guidance for prioritizing policy initiatives, and for effectively averting and mitigating new food crises. Based on an integrated approach, Project ULYSSES seeks to provide general, but sufficiently detailed, responses to the main questions that have been recently posed in the literature and debated in political sphere: a) What are the causes of markets' volatility increases since 2007?; b) What drivers are volatility-increasing and which others are price level-increasing?; c) How likely is that the main commodity markets will experience new episodes of large volatility?; d) To what extent increasing volatility affects agents in the value chain?; e) What are the actual impacts on the most vulnerable households in the EU and in selected developing countries?; f) What policies are more effective to avert and mitigate the effects of markets' volatility at the EU and international levels?

ULYSSES has six objectives:

1. Review the literature on prices volatility of food, feed and non-food commodities
2. Analyse agricultural markets, using updated data, new methods and markets linkages with a view to determine the causes of markets' volatility
3. Identify and evaluate the drivers and factors causing markets volatility, and make projections for supply shocks, demand changes and climate change impacts on agricultural production.
4. Evaluate the impact of markets volatility in the food supply chain in the EU and in developing countries, analysing traditional and new instruments to manage price risks.
5. Evaluate impacts of markets volatility on households in the EU and developing countries.
6. Draw policy-relevant conclusions that help the EU define market management strategies within the CAP after 2013 and inform EU's standing in the international context.

FP7-KBBE-2012-6-singlestage

Volatility of agricultural commodity markets

ULYSSES

Website not available yet



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

1,491,369.00

PROJECT N°

312182

DURATION

36 months

PROJECT START DATE

under negotiation

LIST OF PARTNERS

1. UNIVERSIDAD POLITECNICA DE MADRID (ES)
2. WAGENINGEN UNIVERSITEIT (NL)
3. JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
4. UNIVERSITY OF NATIONAL AND WORLD ECONOMY (BG)
5. GEORG-AUGUST-UNIVERSITAET GOETTINGEN STIFTUNG OEFFENTLICHEN RECHTS (DE)
6. FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS FAO (IT)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: AGRICULTURE

KBBE-2-1-4 Socio-economic research and support to policies

VALORAM



Valorizing Andean microbial diversity through sustainable intensification of potato-based farming systems

VALORAM aims at exploring and valorizing Andean soil microbial diversity for the development of alternative, efficient technologies and crop management practices to improve the sustainability and productivity of Andean cropping systems benefiting rural farming households. The project will focus on potato because of its global importance for small-scale farmers in the central Andean highlands. The participants will use metagenomic, genomic, proteomic and metabolomic analysis to identify novel traits of microorganisms and characterize beneficial soil microbial communities, to achieve the objective. The project specific aims are to (1) explore the agro-ecosystem functions of soil microbes in potato-based cropping systems and preserve the components of this microflora in international culture collections, (2) elucidate the role of rhizosphere microorganisms and communities in promoting plant growth, suppressing soil borne disease and priming plant biotic defenses, developing eco-efficient technologies/ products for sustainable crop production systems, (3) develop applied technologies and knowledge-based systems to improve the sustainability and resilience of potato based cropping systems for the benefit of the indigenous farmers and (4) promote the exchange of scientific knowledge and technologies among partners and the LA scientific community to impulse research in this area and support the continuous development of crop production technologies. The strategy for VALORAM implementation is to engage LA and EU partners in developing and further strengthening collaborative research activities in order to sustainably improve potato-based systems. This is supported by a multidisciplinary team of experts with highly complementary skills and based on a robust management structure with an efficient workshop and communication programme. The results will directly benefit the local partners and may also contribute to increase the productivity of organic potato production in the EU.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,977,386.00

PROJECT N°

227522

DURATION

60 months

PROJECT START DATE

February 2009

LIST OF PARTNERS

1. UNIVERSITE CATHOLIQUE DE LOUVAIN (BE)
2. AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH (AT)
3. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
4. LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN (DE)
5. UNIVERSITEIT GENT (BE)
6. INTERNATIONAL POTATO CENTER (PE)
7. FUNDACION PARA LA PROMOCION E INVESTIGACION DE PRODUCTOS ANDINOS (BO)
8. UNIVERSIDAD TECNICA PARTICULAR DE LOJA (EC)

FP7-KBBE-2008-2B

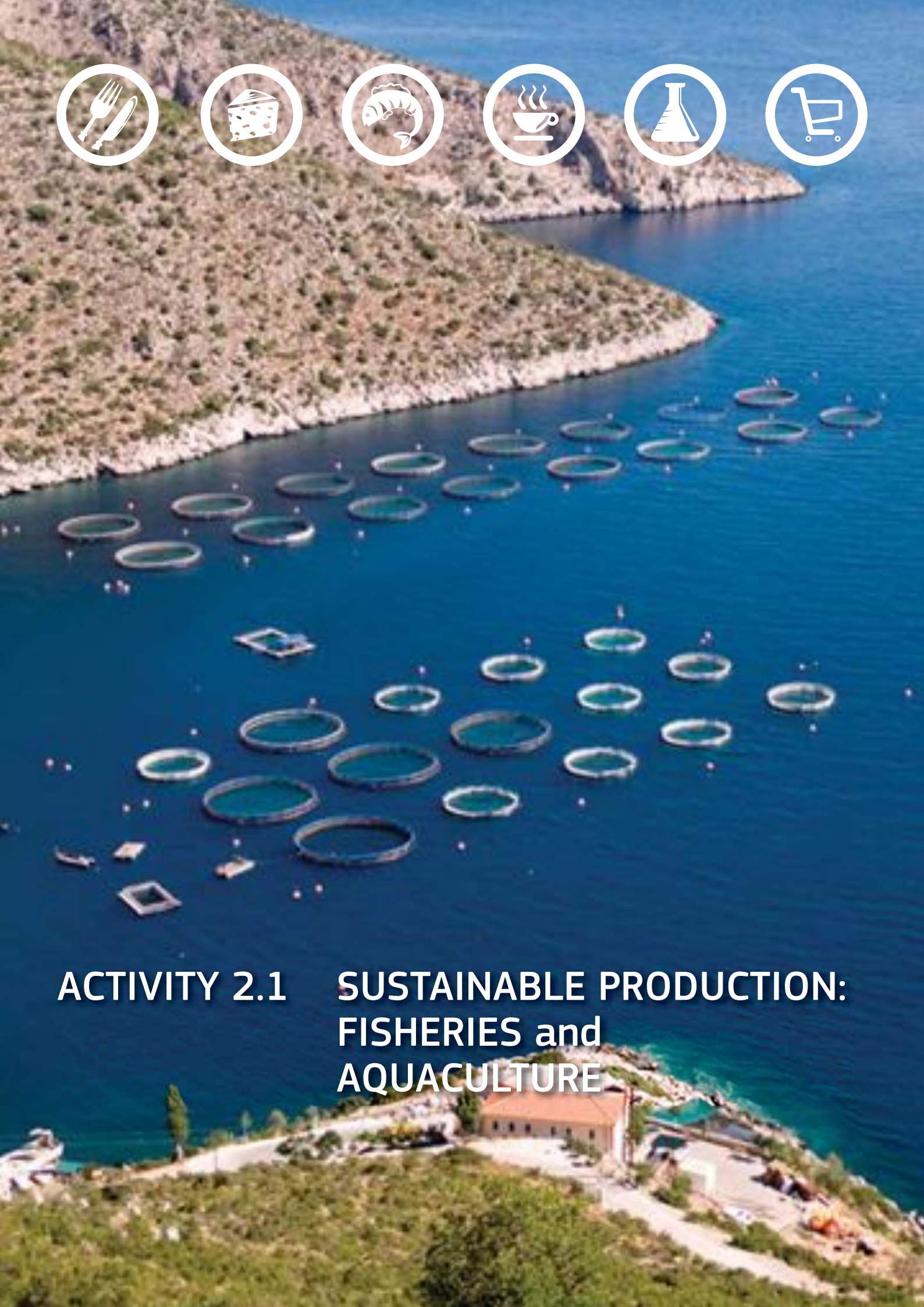
VALORAM



Characterisation and valorisation of Andean soil microbial diversity to support sustainable crop production and agro-ecosystems – SICA (Latin America-Andean region)

<http://valoram.ucc.ie>





**ACTIVITY 2.1 SUSTAINABLE PRODUCTION:
FISHERIES and
AQUACULTURE**

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (fisheries and aquaculture)

AQUATRACE



The development of tools for tracing and evaluating the genetic impact of fish from aquaculture: “AquaTrace”

The genetic changes associated with domestication in aquaculture pose an increasing threat to the integrity of native fish gene pools. Consequently, there is a burgeoning need for the development of molecular tools to assess and monitor the genetic impact of escaped or released farmed fish. In addition, exploration of basic links between genetic differences among farmed and wild fish and differences in important life-history traits with fitness consequences are crucial prerequisites for designing biologically informed management strategies. The project “AquaTrace” will establish an overview of current knowledge on aquaculture breeding, genomic resources and previous research projects for the marine species seabass, seabream and turbot. The project will apply cutting-edge genomic methods for the development of high-powered, cost-efficient, forensically validated and transferable DNA based tools for identifying and tracing the impact of farmed fish in the wild. Controlled experiments with wild and farmed fish and their hybrids will be conducted with salmon and brown trout as model organisms using advanced “common garden” facilities. These experiments will elucidate the fundamental consequences of introgression by pinpointing and assessing the effects on fitness of specific genomic regions. Generated insights will form the basis of a risk assessment and management recommendations including suggestions for mitigation and associated costs. This information and the developed molecular tools will be available as open-access support to project participants and external stakeholders including the aquaculture industry. The project is expected to facilitate technology transfer to the aquaculture sector by promoting better tailored breeding practices and traceability throughout production chain. Overall this initiative will support the development of sustainable European aquaculture and provide “Good Environmental Status” in line with the Marine Strategy Framework Directive.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,185.00

PROJECT N°

311920

DURATION

36 months

PROJECT START DATE

November 2012

LIST OF PARTNERS

1. DANMARKS TEKNISKE UNIVERSITET (DK)
2. HAVFORSKNINGSINSTITUTTET (NO)
3. UNIVERSITA DEGLI STUDI DI PADOVA (IT)
4. UNIVERSIDADE DE SANTIAGO DE COMPOSTELA (ES)
5. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
6. TRACE WILDLIFE FORENSICS NETWORK LIMITED (UK)
7. JRC JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
8. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
9. BANGOR UNIVERSITY (UK)
10. THE UNIVERSITY OF STIRLING (UK)
11. ARISTOTELIO PANEPISTIMIO THESSALONIKIS (EL)
12. AARHUS UNIVERSITET (DK)
13. ISTITUTO SUPERIORE PER LA PROTEZIONE E LA RICERCA AMBIENTALE (IT)
14. MUSTAFA KEMAL UNIVERSITY (TR)
15. SCOTTISH GOVERNMENT (UK)
16. SYNDICAT DES SELECTIONNEURS AVICOLES ET AQUACOLES FRANCAIS (FR)
17. CLUSTER DE LA ACUICULTURA DE GALICIA (ES)
18. JEAN-SÉBASTIEN BRUANT (FR)
19. ARDAG LTD. (IL)
20. PLAGTON SA (EL)
21. LABOGENA (FR)
22. BMR GENOMICS SRL (IT)
23. FIOS GENOMICS LIMITED (UK)

FP7-KBBE-2012-6-singlestage

AQUATRACE



Providing molecular tools for assessing and monitoring the potential genetic impact of aquaculture on native populations (The Ocean of Tomorrow)

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems (fisheries and aquaculture)

ARRAINA



Advanced Research Initiatives for Nutrition & Aquaculture

Sustainable development of European fish farming is dependent on the availability, environmental sustainability of feeds relying less and less on capture fisheries derived fishmeal and fish oil. The European aquaculture industry has made a determined shift towards the use of feeds based on alternative ingredients which continue to ensure the health and welfare of fish and the nutritional value of farmed seafood. However, the long term effects of such interventions and over the full life cycle of the major species farmed in Europe need to be determined. To answer this challenge, ARRAINA will define and provide complete data on the quantitative nutrient requirements of the five major fish species and develop sustainable alternative aquaculture feeds tailored to the requirements of these species with reduced levels of fish meal and fish oil. By developing innovative vectors to deliver specific nutrients, ARRAINA will increase significantly the performance at all physiological stages thus improving overall efficiency of fish production. ARRAINA will apply targeted predictive tools to assess the long-term physiological and environmental consequences of these changes in the different species. This will provide flexibility in the use of various ingredients in the formulation of feeds which are cost-efficient, environmentally friendly and which ensure production of seafood of high nutritional value and quality. ARRAINA will design and deliver new pioneering training courses in fish nutrition to increase research capacities and expertise, particularly in countries of the enlarged EU. By developing applied tools and solutions of technological interest in collaborations with SMEs, ARRAINA will further strengthen the links between the scientific community and the EU feed industry and will contribute to increase the productivity and performance of the aquaculture sector leading to competitive advantage to the whole sector at a global level.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,803.00

PROJECT N°

288925

DURATION

60 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. NASJONALT INSTITUTT FOR ENAERINGS-OG SJOMATFORSKNING (NO)
3. THE UNIVERSITY OF STIRLING (UK)
4. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
5. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
6. UNIVERSIDAD DE LAS PALMAS DE GRAN CANARIA (ES)
7. RESEARCH INSTITUTE FOR FISHERIES, AQUACULTURE AND IRRIGATION (HU)
8. WAGENINGEN UNIVERSITEIT (NL)
9. UNIVERSITA DEGLI STUDI DELL'INSUBRIA (IT)
10. CENTRO DE CIENCIAS DO MAR DO ALGARVE (PT)
11. BIOMAR A/S (DK)
12. SPAROS LDA (PT)
13. VIVIERS DE SARRANCE SAS (FR)
14. GILDESKAL FORSKNINGSSTASJON AS (NO)
15. LANDCATCH NATURAL SELECTION LIMITED (UK)
16. BIODIVERSITY SPA (IT)
17. NOREL SA (ES)
18. ARANYKARASZ MEZOGAZDASAGI HALASZTIES SZAKTANACSADOI SZOLGALTATO BT (HU)
19. ALEVINES Y DORADAS SA (ES)
20. AQUATT UETP LTD (IE)
21. INRA TRANSFERT S.A. (FR)

FP7-KBBE-2011-5

ARRAINA



Aquaculture feeds and fish nutrition: paving the way to the development of efficient and tailored sustainable feeds for European farmed fish

www.rraina.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

BENTHIS



Benthic ecosystem fisheries Impact Study

Benthic ecosystems provide important goods and services, such as fisheries products and supporting, regulation and cultural services. There is serious concern about the adverse impact of fisheries on benthic ecosystem which may negatively affect the fisheries yield and integrity of the sea bed. To develop an integrated approach to the management of human activities in the marine environment, in particular fishing, there is a need to develop quantitative tools to assess the impact of fisheries on the benthic ecosystem and at the same time collaborate with the fishing industry to develop innovative technologies and new management approaches to reduce the impact on benthic ecosystems. BENTHIS will provide the knowledge to further develop the ecosystem approach to fisheries management as required in the Common Fisheries Policy and the Marine Strategy Framework Directive. It will study the diversity of benthic ecosystem in European waters and the role of benthic species in the ecosystem functioning. Fisheries impacts will be studied on benthic organisms and on the geo-chemistry. The newly acquired knowledge will be synthesized in a number of generic tools that will be combined into a fishing/seabed habitat risk assessment method that will be applied to fisheries in the Baltic, North Sea, Western waters, Mediterranean and Black Sea. Fisheries will be selected with the fishing industry based on the impact on the benthic ecosystem. BENTHIS will integrate fishing industry partners to collaborate in testing the performance of innovative technologies to reduce fishing impact. Finally, in collaboration with the fishing industry and other stakeholders, new management approaches will be developed and tested on their effects on the ecosystem and the socio-economic consequences. As such BENTHIS will the urgently needed scientific basis to integrate the role of marine benthic ecosystems in fisheries management.

PROJECT COORDINATOR

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FUNDING SCHEME CP

EC CONTRIBUTION € 5,994,250.00

PROJECT N° 312088

DURATION 60 months

PROJECT START DATE October 2012

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. VLAAMS GEWEST (BE)
3. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
4. BANGOR UNIVERSITY (UK)
5. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
6. THE SCOTTISH MINISTERS ACTING THROUGH MARINE SCOTLAND (UK)
7. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
8. MARINE INSTITUTE (IE)
9. DANMARKS TEKNISKE UNIVERSITET (DK)
10. AARHUS UNIVERSITET (DK)
11. KØBENHAVNS UNIVERSITET (DK)
12. SVERIGES LANTBRUKSUNIVERSITET (SE)
13. HAVFORSKNINGSINSTITUTTET (NO)
14. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
15. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
16. MINISTRY OF FOOD AGRICULTURE AND LIVESTOCK (TR)
17. SP/F SYNTESA (FO)
18. ATLAS VG86 (SE)
19. SUSANNE H PR (DK)
20. WITTRUP SEAFOOD A/S (DK)
21. FISKERISELSKABET GI. BRI AS (DK)
22. MARINE MONITORING VID KRISTINEBERG AB (SE)
23. ANTON DEKKER BEHEER BV (NL)
24. NAGEL CORNELIS WIJBE (NL)
25. TREGUIER LAURENT (FR)
26. YANN JEAN JOSEPH DIDELOT (FR)
27. RETIMAR DI PACI NAZZARENO & C S.N.C (IT)
28. OFFICINA MECCANICA GRILLI DI GRILLI ROBERTO & C. SAS (IT)
29. MORI CARLO SRL (IT)
30. MALKOÇOĞLU BALIKÇILIK HAYVANCILIK SANAYI VE TİCARET LİMİTED SİRKETİ (TR)
31. SADIKLAR SOĞUK HAVA TESİSLERİ VE SU URUNLERİ SANAYİ TİCARET LİMİTED SİRKETİ (TR)
32. VOF PESCE 43 (NL)
33. ONDOKUZ MAYIS UNIVERSİTESİ (TR)

FP7-KBBE-2012-6-singlestage

Integrating the role of marine benthic ecosystems in fisheries management (The Ocean of Tomorrow)

BENTHIS

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

BIVALIFE



Controlling infectious diseases in oysters and mussels in Europe

The two core objectives of BIVALIFE are (i) to provide innovative knowledge related to pathogens infecting oysters and mussels and (ii) to develop practical approaches for the control of infectious diseases and resulting mortality outbreaks these pathogens induce. The project will address the major issue identified by the European commission (i.e. detection and management of infectious diseases in oysters and mussels) at the EU level since the increase in international and intra EU trade and exchanges of animals increases the risk of pathogen transfer and infectious disease outbreak occurrence. In this context, the specific objective of BIVALIFE are: (i) transfer and validate existing methods for detection and identification of oyster and mussel pathogens; (ii) improve the characterisation of oyster and mussel pathogens and develop innovative complementary diagnostic approaches; (iii) characterise culture sites in Europe regarding presence of oyster and mussel pathogens in relation to the presence or absence of mortality; (iv) investigate the life cycle, mechanisms allowing oyster and mussel pathogens to survive outside the host and their original source; (v) identify pathogen intrinsic virulence factors and effects on host defence mechanisms; (vi) assess the relationship between the presence of oyster and mussel pathogens and their role in observed mortality; (vii) develop methods and recommendations for pathogen control and eradication in Europe. The project will focus on three mollusc species, namely the Pacific cupped oyster *Crassostrea gigas* and two mussel species *Mytilus edulis* and *M. galloprovincialis*, the most important species in terms of European production. Interestingly, Pacific oysters and mussels display different levels of susceptibility to diseases. The targeted pathogens will be the virus OsHV-1, *Vibrio* species including *V. splendidus* and *V. aestuarianus*, as well as the parasite *Marteilia refringens* and the bacterium *Nocardia crassostreae*.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,995,636.00

PROJECT N°

266157

DURATION

36 months

PROJECT START DATE

February 2011

LIST OF PARTNERS

1. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
2. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
3. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
4. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
5. INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES. (ES)
6. MARINE INSTITUTE (IE)
7. UNIVERSITA DEGLI STUDI DI GENOVA (IT)
8. UNIVERSITA DEGLI STUDI DI PADOVA (IT)
9. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
10. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
11. ATLANTIUM TECHNOLOGIES LTD (IL)

FP7-KBBE-2010-4

BIVALIFE

Improving European mollusc aquaculture:
disease detection and management

www.bivalife.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

COEXIST



Interaction in coastal waters: A roadmap to sustainable integration of aquaculture and fisheries

Coastal areas are subject to an increase in competing activities and protection (Natura 2000, Marine Strategy Directive) and are a source of potential conflict for space allocation. COEXIST is a broad, multidisciplinary approach to evaluate these interactions with the ultimate goal to provide a roadmap to better integration, sustainability and synergies among different activities in the coastal zone. 1. The project will study the interactions between capture fisheries and aquaculture and evaluate mutual benefits and possible bottlenecks for concomitant development of these activities in the coastal zone within the context of the ecosystem approach to management. 2. It will propose, develop and evaluate the efficiency of spatial management tools (zoning, closed areas, etc) to promote different forms of coastal aquaculture and fisheries at different scales (e.g. local, regional) and it will exploit mutual opportunities (e.g. artificial reefs, protected areas, wind farms, tourism etc) within a context of competition for space by multiple users. 3. The project will address differences in acceptance of activities (fisheries, aquaculture, and other use of the coastal zone) by the society. 4. A detailed strategy for communication and involvement of stakeholders and for dissemination of results to general and targeted audiences is integrated in the project. By these actions, the project will support the new European Maritime Policy and spatial planning of coastal areas. Case studies, supported by national projects will be used to provide data for further analysis through the integrated work packages This will include detailed comparative analyses and integrated models for the regional seas, as well as a synthesis on the European scale. COEXIST will address interactions on a biological and biogeochemical level, as well as a socio-economic level, and the governance and legal aspects.

PROJECT COORDINATOR

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- HAVFORSKNINGSINSTITUTTET (NO)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,995,500.00

PROJECT N°

245178

DURATION

36 months

PROJECT START DATE

April 2010

LIST OF PARTNERS

1. HAVFORSKNINGSINSTITUTTET (NO)
2. JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FUER LANDLICHE RAUME, WALD UND FISCHEREI (DE)
3. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
4. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
5. INSTITUTO NACIONAL DE RECURSOS BIOLOGICOS I.P. INRB (PT)
6. IMAR- INSTITUTO DO MAR (PT)
7. RIJSTA- JA KALATALOUDEN TUTKIMUSLAITOS (FI)
8. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
9. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
10. DANMARKS TEKNISKE UNIVERSITET (DK)
11. AQUATT UETP LTD (IE)
12. SUOMEN YMPARISTOKESKUS (FI)
13. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

FP7-KBBE-2009-3

COEXIST



Sustainable use of seas and oceans: integration of
aquaculture and fisheries in the coastal zone

www.coexistproject.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

COPEWELL



A new integrative framework for the study of fish welfare based on the concepts of allostasis, appraisal and coping styles

COPEWELL aims to provide a better understanding of the underpinning mechanisms and basic knowledge about the physiology, biology, and behaviour of fishes and to give a deeper understanding of the basic mechanisms involved in coping styles. We will use an innovative hypothesis-driven multidisciplinary approach that aims to explore the links between brain function, behaviour and adaptive plasticity (WPs 1 and 2). Underlying mechanisms will be addressed by localising key elements of the stress-responsive serotonergic and learning and memory systems in the telencephalon, and for the first time also analyse rates of brain cell proliferation, neurogenesis, and expression of genes controlling other aspects of brain function, as learning and memory, in fish expressing different coping styles. The project will also focus on the understanding of how animals experience their world, based on appraisal theory and experimental studies of appraisal mechanisms in farmed fish, and not simply on the description of animal behaviour or stress responses (WP2 Appraisal). COPEWELL will further study the ontogeny of brain function and neuroendocrine stress responses in the call species Atlantic salmon (*Salmo salar*), European sea bass (*Dicentrarchus labrax*) and sea bream (*Sparus aurata*), and will provide new insights on the interrelations between different relevant husbandry practices, plasticity of brain function and stress response during early ontogeny. COPEWELL will explore potential consequences of early life stress experiences on the welfare and quality of juvenile fish, substantiate the concept of allostatic stress regulation in fish and determine thresholds between eustress that are considered positive for welfare and distress that can have severe negative consequences for fish welfare as: it will attempt to discriminate between normal adaptive stress responses and situations of potential consequence to animal welfare, in relation to different relevant husbandry practices and rearing methods (WP3Allostasis and WP4 Ontogeny). The expected impact the COPEWELL project is to deepen our knowledge on the development of the brain function, behaviour and stress response in relation to the different husbandry practises and rearing methods. It will also serve to define how short or long episodes of stress during the early life affect the welfare and quality of juveniles and adult fish (WPs 3 & 4). It will significantly contribute in providing and extending the knowledge basis for the development of tools such as new individual-based indicators for a better assessment of fish welfare, e.g. by identifying and verifying non-invasive indicators of coping styles. Perhaps most important, COPEWELL will provide a new framework, based on evolutionary principles and an understanding of subjective experience of welfare as an evolved survival mechanism, making welfare available for scientific inquiry.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

4,498,718.00

PROJECT N°

265957

DURATION

54 months

PROJECT START DATE

July 2011

LIST OF PARTNERS

1. HAVFORSKNINGSINSTITUTTET (NO)
2. CENTRO DE CIENCIAS DO MAR DO ALGARVE (PT)
3. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
4. ISPA. INSTITUTO SUPERIOR DE PSICOLOGIA APLICADA, CRL (PT)
5. NOFIMA MARIN AS (NO)
6. TCN PARTNERSHIP TRANSNATIONAL CONSULTING PARTNERSHIP (DE)
7. STICHTING KATHOLIEKE UNIVERSITEIT (NL)
8. UNIVERSITETET I OSLO (NO)
9. UNI RESEARCH AS (NO)
10. UNIVERSITAT AUTONOMA DE BARCELONA (ES)
11. PANEPISTIMIO KRITIS (UNIVERSITY OF CRETE) (EL)
12. THE UNIVERSITY OF STIRLING (UK)
13. UPPSALA UNIVERSITET (SE)
14. DANMARKS TEKNISKE UNIVERSITET (DK)
15. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
16. UNIVERSITY OF PATRAS (EL)
17. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

FP7-KBBE-2010-4

Understanding of the basic mechanisms involved in coping strategies of fish towards improvement of welfare

COPEWELL

www.imr.no/copewell



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

ECOKNOWS



Effective use of ecosystem and biological knowledge in fisheries

The general aim of the ECOKNOWS project is to improve the use of biological knowledge in fisheries science and management. The lack of appropriate calculus methods and fear of statistical overparameterisation has limited biological reality in fisheries models. This reduces biological credibility perceived by many stakeholders. We solve this technical estimation problem by using up-to date methodology supporting more effective use of data. The models suggested will include important knowledge about biological processes and the applied statistical inference methods allow to integrate and update this knowledge in stock assessment. We will use the basic biological data (such as growth, maturity, fecundity, maximum age and recruitment data sets) to estimate general probabilistic dependencies in fish stock assessments. In particular, we will seek to improve the use of large existing biological and environmental databases, published papers and survey data sets provided by EU data collection regulations and stored by ICES and EU member countries. Bayesian inference will form the methodological backbone of the project and will enable realistic estimations of uncertainty. We develop a computational learning approach that builds on the extensive information present in FishBase (www.fishbase.org). The developed methodology will be of fundamental importance, especially for the implementation of the Ecosystem Approach to Fisheries Management. It has been a difficult challenge even for target species with long data series, and now the same challenge is given for new and poorly studied species. We will improve ways to find generic and understandable biological reference points, such as the required number of spawning times per fish, which also supports the management needs in the developing countries. ECOKNOWS applies decision analysis and bioeconomic methods to evaluate the validity and utility of improved information, helping to plan efficient EU data collection.

PROJECT COORDINATOR

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- HELSINGIN YLIOPISTO (FI)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,993,607.00

PROJECT N°

244706

DURATION

48 months

PROJECT START DATE

September 2010

LIST OF PARTNERS

1. HELSINGIN YLIOPISTO (FI)
2. RIISTA- JA KALATALOUDEN TUTKIMUSLAITOS (FI)
3. INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA (DK)
4. FISHBASE INFORMATION & RESEARCH GROUP INC (PH)
5. ARISTOTELIO PANEPISTIMIO THESSALONIKIS (EL)
6. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
7. MARINE INSTITUTE (IE)
8. IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE (UK)
9. FISHERIES AND OCEANS CANADA (CA)
10. FISKERIVERKET (SE)
11. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
12. INSTITUT SUPERIEUR DES SCIENCES AGRONOMIQUES, AGROALIMENTAIRES, HORTICOLES ET DU PAYSAGE (FR)
13. INSTITUTO ESPANOL DE OCEANOGRAFIA (ES)

FP7-KBBE-2009-3

ECOKNOWS

Improving fisheries assessment methods by
integrating new sources of biological knowledge

www.ecoknows.eu/



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

EUROSHELL



Bridging the gap between science and producers to support the European marine mollusc production sector

Under the acronym EUROSHELL, this proposal will provide solutions to identified challenges that may constrain the transfer of knowledge to the shellfish sector and thus affect its sustainable development. It will focus on identification of the underlying factors that inhibit effective knowledge management in the sector and provide regional forums to facilitate dialogue between shellfish companies (especially through their regional or national producers' organisations) and researchers, with a strong focus on developing efficient methodology for knowledge transfer. This will result in the production of visions for the future of the sector and the identification of key research objectives that could be integrated in the European Aquaculture Technology and Innovation Platform (EATIP) and also provide clear cooperation opportunities with the Fisheries Local Action Groups (FLAGS) of the European Fisheries Areas Network (FARNET) through enhanced methodology for an extension network. The core objectives of EUROSHELL are to:

- Enhance integration of knowledge into the production cycle of the main farmed species, by assessing current critical problems experienced by the sector that have a direct link to research and reviewing current knowledge and especially the extent of its uptake.
- Assess the current structural organisation that links knowledge to practice in key European production countries and identify solutions that will address structural difficulties (where these exist) for shellfish SME's to participate in RTDI initiatives.
- Identify future visions for the European shellfish sector by industry, including the identification of gaps and research needs, so as to lay the basis for more effective methodology for future dialogue and possible integration of the sector into the EATIP.

EUROSHELL does not seek to create new STRUCTURES for knowledge management in the sector, but looks to strengthen the existing relationships between the existing one.

PROJECT COORDINATOR

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- COMITE NATIONAL DE LA CONCHYLICULTURE (FR)

FUNDING SCHEME

CSA

EC CONTRIBUTION €

649,983.00

PROJECT N°

312025

DURATION

18 months

PROJECT START DATE

October 2012

LIST OF PARTNERS

1. COMITE NATIONAL DE LA CONCHYLICULTURE (FR)
2. EUROPEAN AQUACULTURE SOCIETY (BE)
3. ASSOCIATION EUROPEENNE DES PRODUCTEURS DE MOLLUSQUES (FR)
4. CONSELLO REGULADOR D.O. MEXILLON DE GALICIA (ES)
5. ASSOCIAZIONE MEDITERRANEA ACQUACOLTORI (IT)
6. IRISH SALMON GROWERS ASSOCIATION LIMITED (IE)
7. PRODUCTENORGANISATIE VAN DE NEDERLANDSE MOSSELCULTUUR (NL)
8. SAGB COMMERCIAL SERVICES LTD (UK)
9. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
10. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
11. UNIVERSITA CA' FOSCARI VENEZIA (IT)
12. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
13. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
14. VIKING FISH FARMS LIMITED (UK)
15. AC2G SARL (FR)
16. COMITE REGIONAL DE LA CONCHYLICULTURE BRETAGNE NORD (FR)
17. COMITE REGIONAL DE LA CONCHYLICULTURE DE POITOU CHARENTES ORGANISME PROFESSIONNEL (FR)
18. COMITE REGIONAL DE LA CONCHYLICULTURE DE LA MEDITERRANEE (FR)

FP7-KBBE-2012-6-singlestage

EUROSHELL



Bridging the gap between science and producers to support the European marine mollusc production sector

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

FACTS



Forage Fish Interactions

Removal of a forage fish has consequences for both predators and prey of forage fish. As everything is connected, every management action has a price which goes beyond the apparent, direct effect on the target species. The fishery on forage fish can therefore not be seen in isolation, as the immediate gain in profit from the fishery has to be discounted by the lowered potential for production of large piscivorous fish. Management actions on other species also influences forage fish, i.e. conservation efforts on marine mammals or sea birds have direct consequences for the predation pressure on forage fish. The objective of the project is to provide insight and quantitative advice on the ecosystem wide consequences of management actions directly or indirectly related to forage fish. The two overarching questions are: 1. What are the consequences of forage fish fisheries on (a) predator growth and abundance, (b) economic output of fisheries on piscivorous species, and (c) ecosystem stability and the risk for regime shifts 2. What are the consequences of changes in predator populations on forage fish populations and fisheries. The methods is a combination of ecosystem models, of process studies aimed at feeding into the models, of economical models, and of data-analysis of existing data sources. The project covers four ecosystems in detail; Norwegian-Barents Sea, Baltic Sea, North Sea and Bay of Biscay. FACTS bring together leading European fisheries and university institutes working on creating the tools for ecosystem based management. The active involvement of the institutes in the current management provides a means for the results of the project to feed into management. The project furthermore includes a network component which ensures a wider dissemination of methods and results within the marine scientific community.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,938,375.00

PROJECT N°

244966

DURATION

36 months

PROJECT START DATE

January 2010

LIST OF PARTNERS

1. DANMARKS TEKNISKE UNIVERSITET (DK)
2. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
3. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
4. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
5. UNIVERSITAET HAMBURG (DE)
6. HAVFORSKNINGSINSTITUTTET (NO)
7. SYDDANSK UNIVERSITET (DK)
8. CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL (DE)
9. RIISTA- JA KALATALOUDEN TUTKIMUSLAITOS (FI)
10. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
11. KØBENHAVNS UNIVERSITET (DK)
12. INSTITUT FUER OSTSEEFORSCHUNG WARNEMUENDE AN DER UNIVERSITAET ROSTOCK (DE)
13. THE UNIVERSITY COURT OF THE UNIVERSITY OF ST ANDREWS (UK)
14. INSTITUTO ESPANOL DE OCEANOGRAFIA (ES)
15. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

FP7-KBBE-2009-3

FACTS



Sustainable use of seas and oceans: importance
of foraging fish in the ecosystem

www.facts-project.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

FISHPOPTRACE



Fish Population Structure and Traceability

Although exploited fishes have traditionally been managed on a geographic basis, for conservation purposes they should be managed at the population level: the extent and dynamics of population structuring underlies resilience and sustainability. More effective enforcement and conservation demands a focus on identification and monitoring of wild fish populations and traceability of products. FishPopTrace brings together expertise in fish traceability projects (Fish and Chips, FishTrace, FISH-BOL) to: 1. Integrate data from European fish species traceability projects, and to generate a single compatible database and tissue archive managed by the Joint Research Centre of the European Commission. 2. Examine single nucleotide polymorphisms (SNPs) and otolith microchemistry and morphometrics in widely distributed populations of cod, hake, herring and sole. Outputs will comprise population-level signatures associated with fish origins in early life and representative spawning groups. 3. Undertake validation of traceability tools in relation to end-user technology. 4. Develop a population monitoring system based on genetic and otolith data that will assess population stability in a temporal and spatial framework. 5. Test the utility of additional novel traceability systems (fatty acid profiles, proteomics, gene expression, microarray platform for SNP genotyping). 6. Facilitate technology transfer in relation to enforcement and conservation policies of the EU Common Fisheries Policy (CFP) and associated socio-economic consequences. Outputs from FishPopTrace will improve the traceability of fish and fish products and protection of consumer interests through enhanced understanding of the dynamics, temporal stability and distribution of major populations of four key exploited fish species. Central elements of the output will be the development and evaluation of end-user tools, a Cost Benefit Analysis and a final report setting FishPopTrace in the context of the CFP.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,949,984.00

PROJECT N°

212399

DURATION

39 months

PROJECT START DATE

March 2008

LIST OF PARTNERS

1. BANGOR UNIVERSITY (UK)
2. DANMARKS TEKNISKE UNIVERSITET (DK)
3. UNIVERSITA DEGLI STUDI DI PADOVA (IT)
4. UNIVERSIDAD COMPLUTENSE DE MADRID (ES)
5. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
6. ALMA MATER STUDIOURUM-UNIVERSITA DI BOLOGNA (IT)
7. UNIVERSITETET I BERGEN (NO)
8. JRC JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
9. UNIVERSITAET BREMEN (DE)
10. WILDLIFE DNA SERVICES LIMITED*WONAS (UK)
11. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
12. NATIONAL AGRICULTURAL RESEARCH FOUNDATION. (EL)
13. ASOCIACION NACIONAL DE FABRICANTES DE CONSERVAS DE PESCADOS Y MARISCOS-CENTRO TECNICO NACIONAL DE CONSERVACION DE PRODUCTOS DE LA PESCA (ES)
14. AARHUS UNIVERSITET (DK)
15. RUSSIAN FEDERAL RESEARCH INSTITUTE OF FISHERIES AND OCEANOGRAPHY (RU)
16. TRACE WILDLIFE FORENSICS NETWORK LIMITED (UK)

FP7-KBBE-2007-1

FISHPOPTRACE

The structure of fish populations and
traceability of fish and fish products

<http://fishpoptrace.jrc.ec.europa.eu>



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

LIFECYCLE



Building a biological knowledge-base on fish lifecycles for competitive, sustainable European aquaculture

LIFECYCLE will deliver a knowledge-base to improve competitiveness and sustainability of European aquaculture, through a combination of question-problem driven approaches. The focus will be on early developmental events, growth and environmental adaptation throughout the lifecycle, and on the physiology and immunology of key life-stage transitions, such as metamorphosis, smoltification and puberty. To advance current knowledge on mechanisms governing essential biological functions in fish, state-of-the-art physiological research will be combined with functional genomics by leading European research groups. LIFECYCLE will focus on all major life stages of sea bass, sea bream, Atlantic salmon and rainbow trout. For these important aquaculture species, substantial resources and biological information exists which will be exploited and integrated to potentiate the overall impact. Two key conceptual approaches will be taken: 1. Changes in physiological systems at different points during the lifecycle will be studied to establish how early factors impact on later stages. 2. Cross-cutting experiments will address integration and crosstalk between physiological systems. LIFECYCLE is planned to direct research at current production bottlenecks. The knowledge generated about development and growth, adaptation and homeostasis, the immune system, sex differentiation and puberty will have a major impact on alleviating problems linked to abnormal larval development, skeletal deformities, poor growth and energy utilization, mortalities related to life stage transitions, poor environmental performance, and unwanted sexual maturation. The focused dissemination of such knowledge will make the EU aquaculture industry more efficient and stimulate its sustainable expansion. The knowledge-base established will pave way for future advances within fields of stress and disease control, breeding selection, environmental performance and species diversification.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,995,801.00

PROJECT N°

222719

DURATION

48 months

PROJECT START DATE

February 2009

LIST OF PARTNERS

1. GOETEBORGS UNIVERSITET (SE)
2. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
3. HAVFORSKNINGSINSTITUTTET (NO)
4. THE UNIVERSITY COURT OF THE UNIVERSITY OF ST ANDREWS (UK)
5. UNIVERSITEIT UTRECHT (NL)
6. CENTRO DE CIENCIAS DO MAR DO ALGARVE (PT)
7. UNIVERSITETET I BERGEN (NO)
8. UNIVERSITE DE RENNES I (FR)
9. UNIVERSITAT DE BARCELONA (ES)
10. CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
11. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
12. MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. (DE)
13. FISKEY HF (IS)
14. INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES (ES)

FP7-KBBE-2007-2A

LIFECYCLE

Essential biological functions related to the most relevant stages of aquaculture fish life-history

www.lifecycle-fp7.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

MADE



Mitigating ADverse Ecological impacts of open ocean fisheries

A particular attention has been paid worldwide on longline fisheries as they catch considerable amount of by-catch (seabirds, turtles, sharks, etc.). Seabird and turtles by-catch mitigation methods have now been established in many fisheries worldwide, but similar efforts must be put to reduce by-catch of sharks. In the same ecosystems, another issue attracts the attention of international tuna commissions: the use of drifting fish aggregating devices (FADs). These FADs are responsible for major catches of juvenile tuna and non target pelagic species (sharks). Finally, the effects of thousands of FADs released regularly in the tropical oceans are unknown, and must be studied to estimate if they impact the biology of pelagic species. The European open ocean tropical and Mediterranean pelagic fishery (Spain, France, Portugal, Italy, Greece) is one of the main sources of catch, income and employment for the European fishery, with interactions with many developing countries. The main objective of the project is to develop measures to mitigate adverse impacts of fisheries targeting large pelagic fish in the open ocean: purse seiners using FADs and longliners. Two main categories of mitigation measures will be studied: spatial management issues (e.g. closure areas) and technical solutions to reduce by-catch in these fisheries. The main concept of MADE is to follow a multi-disciplinary and comparative approach, combining biological and technological studies with economical analyses in different sites (Indian and Atlantic oceans, Mediterranean Sea), with a particular effort to closely associate fishers from the beginning of this research. Hightech technology and novel approaches will be employed (electronic tagging, in situ and in vitro experiments, etc.), and a particular effort will be devoted to disseminate results to fishers, tuna commissions, EU DG Fisheries, and scientists.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,978,200.00

PROJECT N°

210496

DURATION

48 months

PROJECT START DATE

May 2008

LIST OF PARTNERS

1. INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT (FR)
2. SEYCHELLES FISHING AUTHORITY (SC)
3. UNIVERSITE LIBRE DE BRUXELLES (BE)
4. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
5. AQUASTUDIO (IT)
6. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
7. UNIVERSIDADE FEDERAL RURAL DE PERNAMBUCO (BR)
8. UNIVERSITE DE LA REUNION (FR)
9. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
10. UNIVERSITE MONTPELLIER II (FR)
11. FONDAZIONE ACQUARIO DI GENOVA ONLUS (IT)
12. IMAR- INSTITUTO DO MAR (PT)
13. UNIVERSITY OF PATRAS (EL)

FP7-KBBE-2007-1

Mitigating adverse impacts of fisheries

MADE

www.made-project.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

MYFISH



Maximising yield of fisheries while balancing ecosystem, economic and social concerns

The MSY concept was included as a principle in the 2009 Green Paper on the reform of the Common Fisheries Policy (CFP) in accordance with the global imperative to manage fish stocks according to the maximum sustainable yield (MSY). This implies a commitment to direct management of fish stocks towards achieving MSY by 2015. Attaining this goal is complicated by the lack of common agreement on the interpretation of "sustainability" and "yield" and by the effects that achieving MSY for one stock may have on other stocks and broader ecosystem, economic, or social aspects. MYFISH will provide definitions of MSY variants which maximize other measures of "yield" than biomass and which account for the fact that single species rarely exist in isolation. Further, MYFISH will redefine the term "sustainable" to signify that Good Environmental Status (MSFD) is achieved and economically and socially unacceptable situations are avoided, all with acceptable levels of risk. In short, MYFISH aims at integrating the MSY concept with the overarching principals of the CFP: the precautionary and the ecosystem approach. MYFISH will achieve this objective through addressing fisheries in all RAC areas and integrating stakeholders (the fishing industry, NGOs and managers) throughout the project. Existing ecosystem and fisheries models will be modified to perform maximization of stakeholder approved yield measures while ensuring acceptable impact levels on ecosystem, economic and social aspects. Implementation plans are proposed and social aspects addressed through active involvement of stakeholders. Finally, effects of changes in environment, economy and society on MSY variants are considered, aiming at procedures rendering the MSY approach robust to such changes. The expertise of 26 partners from relevant disciplines including fisheries, ecosystem, economic and social science are involved in all aspects of the project. Global experience is engaged from North America and the South Pacific.

PROJECT COORDINATOR

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FUNDING SCHEME CP

EC CONTRIBUTION € 4,999,999.00

PROJECT N° 289257

DURATION 48 months

PROJECT START DATE March 2012

LIST OF PARTNERS

1. DANMARKS TEKNISKE UNIVERSITET (DK)
2. MARINE INSTITUTE (IE)
3. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
4. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
5. CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL (DE)
6. JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FUER LANDLICHE RAUME, WALD UND FISCHEREI (DE)
7. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
8. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
9. PLYMOUTH MARINE LABORATORY (UK)
10. KØBENHAVNS UNIVERSITET (DK)
11. HAVFORSKNINGSINSTITUTTET (NO)
12. MORSKI INSTYTUT RYBACKI. PANSTWOWY INSTYTUT BADAWCZY (PL)
13. AALBORG UNIVERSITET (DK)
14. IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE (UK)
15. UNIVERSITAET HAMBURG (DE)
16. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
17. INSTITUTO ESPANOL DE OCEANOGRAFIA (ES)
18. JRC JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
19. AQUAMARINE ADVISERS (SE)
20. THE UNIVERSITY COURT OF THE UNIVERSITY OF ST ANDREWS (UK)
21. NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU (NO)
22. AQUATT UETP LTD (IE)
23. UNIVERSIDAD DE VIGO (ES)
24. THE QUEEN'S UNIVERSITY OF BELFAST (UK)
25. CODE LUTIN SARL (FR)
26. KILLYBEGS FISHERMEN'S ORGANISATION LIMITED COOPERATIVE SOCIETY (IE)
27. KUTTERFISCH-ZENTRALE GMBH (DE)
28. VOF DE DRIE GEBROEDERS (NL)
29. WILMA BV (NL)
30. VOF VISSERIJBEDRIJF J 'T MANNETJE SL-3 (NL)
31. KARBAK APS (DK)

FP7-KBBE-2011-5

MYFISH



European
Commission

Beyond Maximum Sustainable Yield (MSY): defining
management targets and their consequences

www.myfishproject.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

PREVENT ESCAPE



Assessing the causes and developing measures to prevent the escape of fish from sea-cage aquaculture

The escape of fish from sea-cage aquaculture is perceived as a serious threat to natural biodiversity in Europe's marine waters. Escaped fish may cause undesirable genetic effects in native populations through interbreeding, and ecological effects through predation, competition and the transfer of diseases to wild fish. Technical and operational failures of fish farming technology cause escapes. Cages break down in storms, wear and tear of the netting causes holes, and operational accidents lead to spills of fish. Sea-cage equipment is marketed and used across Europe, thus knowledge relevant to the culture of numerous species in diverse environments is required to produce robust equipment and implement risk adverse operations. The Prevent Escape project will conduct and integrate biological and technological research on a pan-European scale to improve recommendations and guidelines for aquaculture technologies and operational strategies that reduce escape events. Through research focused on sea-cages and their immediate surrounds, we will assess technical and operational causes of escape incidents, assess the extent of escapes of reproductive gametes and fish, determine the inherent behaviours that pre-dispose certain species of fish towards a higher probability of escaping, and document the dispersal of escapees to develop and test recapture strategies. Information from these components of the project will feed into research specifically aimed at benchmarking the performance of equipment under farming conditions and thereby improving operations and equipment production, and advancing national and international standards for the design, construction and use of aquaculture equipment. These key pieces of information, when added to existing knowledge, will allow determination of practical, implementable measures to prevent escapes and mitigate the effects of escapees. If prevention and mitigation are more successful, genetic and ecological impacts should diminish.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,970,646.00

PROJECT N°

226885

DURATION

36 months

PROJECT START DATE

April 2009

LIST OF PARTNERS

1. SINTEF FISKERI OG HAVBRUK AS (NO)
2. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
3. UNIVERSIDAD DE ALICANTE (ES)
4. THE SCOTTISH ASSOCIATION FOR MARINE SCIENCE (UK)
5. STIFTELSEN NORSK INSTITUTT FOR NATURFORSKNING (NO)
6. NOFIMA MARIN AS (NO)
7. UNIVERSITY OF CRETE-SPECIAL ACCOUNT FOR RESEARCH (EL)
8. MARINE INSTITUTE (IE)
9. UNIVERSITA TA MALTA (MT)
10. TECNALIA CORPORACION TECNOLOGICA AIE (ES)
11. UNIVERSIDAD DE LAS PALMAS DE GRAN CANARIA (ES)

FP7-KBBE-2008-2B

PREVENT ESCAPE

Assessment and mitigation of the impact
of aquaculture on wild populations

www.preventescape.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

PRO-EEL



Reproduction of European Eel: Towards a Self-sustained Aquaculture

The recent decline of European eel (*Anguilla anguilla*) and no signs of recovery has brought attention to the biologically unsustainable exploitation of the stock. In September 2007, the EU has adopted the Council Regulation 1100/2007 establishing measures for the recovery of the European eel stock. However, eel are still fished intensively for human consumption while aquaculture and restocking rely exclusively on the supply of glass eels caught each year. A controlled production of eel larvae is ever more urgent. The objective of PRO-EEL is to develop standardised protocols for production of high quality gametes, viable eggs and feeding larvae. The approach is to expand knowledge about the intricate hormonal control and physiology of eels which complicates artificial reproduction. This knowledge will be applied in the development of suitable methods to induce maturation considering different rearing conditions. Knowledge about the gametogenesis and maturation pattern will be developed in small scale tests and applied to establish standardised fertilisation procedures. New knowledge about functional anatomy of embryos and yolksac larvae will be applied to develop suitable feed. Protocols for larval production will be tested in full scale experimental facilities managed in collaboration with a qualified SME. The integrated protocols and technology development will be evaluated relative to the output of healthy embryos and yolksac larvae. Larval feeds will be developed towards pioneering first-feeding in European eel larvae, which will be a major breakthrough and promising step towards a self-sustained aquaculture. The strength of the project is its interdisciplinary approach and the unique expertise of the consortium. PRO-EEL brings together leading institutes in eel reproduction complemented by excellence in disciplines filling gaps in knowledge and technology. A tight collaboration with the aquaculture industry promotes the applicability of developed technology.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,307.00

PROJECT N°

245257

DURATION

48 months

PROJECT START DATE

April 2010

LIST OF PARTNERS

1. DANMARKS TEKNISKE UNIVERSITET (DK)
2. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
3. UNIVERSITEIT LEIDEN (NL)
4. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
5. UNIVERSIDAD POLITECNICA DE VALENCIA (ES)
6. NOFIMA AS (NO)
7. UNIVERSITEIT GENT (BE)
8. KØBENHAVNS UNIVERSITET (DK)
9. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
10. BILLUND AQUAKULTURSERVICE APS (DK)
11. WAGENINGEN UNIVERSITEIT (NL)
12. INSTITUT NATIONAL DES SCIENCES ET TECHNOLOGIES DE LA MER (TN)
13. HAVFORSKNINGSINSTITUTTET (NO)
14. NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU (NO)
15. BIOMAR AS (DK)

FP7-KBBE-2009-3

From capture based to self-sustained aquaculture

PRO-EEL

www.pro-eel.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

PROMICROBE



Microbes as positive actors for more sustainable aquaculture

Aquaculture is still facing a number of bottlenecks. To further develop aquaculture, the major bottlenecks need to be systematically removed. At the production level, unpredictable larval survival and larval/juvenile quality and robustness are major bottlenecks which have strong microbial components. With respect to microbial interference, we need to make use of the natural mutualistic symbiotic relationships that have evolved over million of years between the host and the microbial community. Hence, we need to understand the mutual and reciprocal interactions between them and use these interactions to the benefit of the viability and robustness of the fish under aquaculture conditions. This “join them” approach is contradictory to the traditional “beat them” strategy generally applied in microbial management used in human medicine, agriculture and aquaculture. This project suggests bringing together various European research groups that have contributed to some important methodological break-throughs that can be used in the study of host/microbe interactions and can help to disentangle the complex interplay between the different components of the aquaculture ecosystem. The work packages are directed towards the systematic gathering of novel information in relation to the axis host-host microbial community-system microbial community. It is anticipated that this novel information will allow developing new concepts that will be translated into new or adapted protocols to rear aquaculture organisms in a biological stable and economical efficient way.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,996,531.00

PROJECT N°

227197

DURATION

48 months

PROJECT START DATE

February 2009

LIST OF PARTNERS

1. UNIVERSITEIT GENT (BE)
2. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
3. WAGENINGEN UNIVERSITEIT (NL)
4. NORGES TEKNISK NATURVITENSKAPELIGE UNIVERSITET (NO)
5. STIFTELSEN SINTEF (NO)
6. SINTEF FISKERI OG HAVBRUK AS (NO)
7. VIB (BE)

FP7-KBBE-2008-2B

Microbial control for more sustainable aquaculture

PROMICROBE

www.promicrobe.ugent.be



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

REPROSEED



REsearch to improve PROduction of SEED of established and emerging bivalve species in European hatcheries

Secure and stabilised hatchery production of bivalve seed is the unifying objective of the REPROSEED project. Development of innovative new methods will lead to high quality seed of guaranteed physiological health, sanitary status and genetic diversity. By considering the biology of bivalve life stages and the trophic and microbial environment of rearing conditions REPROSEED researches ways of controlling key processes, like reproduction, larval rearing and metamorphosis. New technological advances, like recirculation systems and outdoor algal culture, will provide ways to reduce costs. The need for hatcheries is growing in Europe due to demands from the shellfish industry for quality juveniles and concerns about wild seed due to inconsistent spatfall or environmental harm caused by seed collection of some species. Four economically important molluscs were selected to represent these needs: two species already reared in hatcheries, *Crassostrea gigas* and *Pecten maximus*, and two emerging hatchery species, *Mytilus edulis* and *Ruditapes decussatus*. Scientific research is most advanced for *C. gigas*, so its further development will enable us to attain a level of excellence. Knowledge on this species and on *P. maximus*, an excellent model for solving particular bivalve rearing problems, can also help improve hatchery culture of the other species. Inter-specific differences enable comparative study of important traits. REPROSEED investigates the physiological basis of early sexual maturation, gamete competency, immunity and metamorphosis, at cellular and molecular levels, including genomics and proteomics. Application of these results and dedicated studies will be made on practical aspects of controlled bivalve reproduction, nutritional needs for broodstock conditioning and larval growth (including testing of mutant yeasts and lipid microcapsules) and the benefits of probiotics. Advances will be shared with end-users throughout the project.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,994,853.00

PROJECT N°

245119

DURATION

48 months

PROJECT START DATE

April 2010

LIST OF PARTNERS

1. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
2. UNIVERSITE DE CAEN BASSE NORMANDIE (FR)
3. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
4. BANGOR UNIVERSITY (UK)
5. UNIVERSITETET I BERGEN (NO)
6. UNIVERSIDADE DE SANTIAGO DE COMPOSTELA (ES)
7. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
8. INSTITUTO NACIONAL DE RECURSOS BIOLÓGICOS I.P. INRB (PT)
9. UNIVERSITA DEGLI STUDI DI PADOVA (IT)
10. SYNDICAT DES SELECTIONNEURS AVICOLES ET AQUICOLES FRANCAIS (FR)
11. SOCIETE ATLANTIQUE DE MARICULTURE (FR)
12. SCALPRO AS (NO)

FP7-KBBE-2009-3

Improving mollusc spat production in hatcheries

REPROSEED

www.reproseed.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

SARNISSA



Sustainable Aquaculture Research Networks in Sub Saharan Africa

The project concept is to build a sustainable aquaculture research network based on academics and other professionals between Europe and Africa, with a focus on Sub-Saharan Africa. The three-year work plan will strengthen alliances among experienced and emergent players in the African and wider aquaculture scene that will build on an existing framework knowledge resource base and exchange platform - the 'Aquaculture Compendium'. Project partners: Institute of Aquaculture, University of Stirling (coordinator; UK); CIRAD (France); WorldFish Center (Egypt), CABI (UK HQ); Asian Institute of Technology (Thailand), Bunda College of Agriculture (Malawi); IRAD (Cameroon); and ETC (Netherlands). This consortium has a balance of expertise in aquaculture research, development and policy information technology; ability to work in different linguistic areas; and a track record in the implementation of activities at local to international levels. The project will work across a wide range of stakeholders (researchers, SMEs, government agencies, NGOs, producers and others) throughout Sub-Saharan Africa; between anglophone and francophone regions in Africa; between Africa and Asia; and between Europe and Africa. In 6 Work Packages, the project will deliver (1) the comprehensive interdisciplinary knowledge base required for Sub-Saharan African aquaculture to develop in a sustainable way; (2) a sustainable process to identify and nurture new initiatives for Sub-Saharan African aquaculture research, with key involvement of European stakeholders; (3) learning and adaptation for Sub-Saharan Africa of the processes of aquaculture research-into-practice through multi-stakeholder collaboration of research-to-practice networks developed in Southeast Asia; (4) maximal dissemination of project outputs; and (5) tools to aid policy-making for aquaculture in Africa. Mechanisms will be in place by the project end to enable sustainability of the networks established during the project.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

996,036.00

PROJECT N°

213143

DURATION

36 months

PROJECT START DATE

February 2008

LIST OF PARTNERS

1. THE UNIVERSITY OF STIRLING (UK)
2. CENTRE DE COOPERATION INTERNATIONALE EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
3. INTERNATIONAL CENTER FOR LIVING AQUATIC RESOURCES (MY)
4. CAB INTERNATIONAL (UK)
5. ASIAN INSTITUTE OF TECHNOLOGY* (TH)
6. UNIVERSITY OF MALAWI (MW)
7. INSTITUT DE RECHERCHE AGRICOLE POUR LE DEVELOPPEMENT (CM)
8. STICHTING ETC (NL)

FP7-KBBE-2007-1

SARNISSA

Consolidate alliances with third
countries in the field of aquaculture

www.sarnissa.org



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

SELFDOTT



From capture based to SELF-sustained aquaculture and Domestication Of bluefin tuna, *Thunnus thynnus*

SELFDOTT proposes to implement knowledge already obtained on the artificial control of reproduction of the Atlantic bluefin tuna (BFT), *Thunnus thynnus*, to obtain viable eggs, and study embryonic and larval development for the production of fry (juveniles). At the same time, suitable and environmentally performing feeds for the growout of BFT will be developed, thus reducing or eliminating the practice of raw fish importation and feeding by the fattening industry. Wild juvenile and mature BFT will be reared in captivity at two sites in the Mediterranean, and will be used to study puberty, gametogenesis, and the influence of diet on reproductive maturation and gamete quality. Mature fish will be induced to spawn using hormone implants and the eggs will be collected using devices designed specifically for cages. To establish the knowledge-base for controlled development of BFT larvae, the mesocosm and artificial larval rearing methods will be employed. The ontogenesis of essential biological functions will be studied, including environmental perception, digestion, immunity and behaviour. A protocol for the commercial-scale larval rearing of BFT will be recommended at the end of the project. Whole body and stomach composition of wild fish will be analyzed and serve as a guide to formulate nutritionally complete artificial feeds for BFT. Juveniles will be captured from the wild, adapted to captive conditions and used to carry out weaning and feeding experiments, using moist and dry pelleted diets. The environmental impact of the formulated feeds will be examined and compared to existing raw-fish practises. SELFDOTT will produce the basic knowledge necessary for the development of a self-sustained aquaculture industry for the BFT in the Mediterranean, thus enhancing the competitiveness of the EU aquaculture industry, while at the same time reducing the pressure on the wild BFT stocks and ensuring the conservation and recovery of this magnificent fish.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,979,966.00

PROJECT N°

212797

DURATION

47 months

PROJECT START DATE

January 2008

LIST OF PARTNERS

1. INSTITUTO ESPANOL DE OCEANOGRAFIA (ES)
2. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
3. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
4. HEINRICH-HEINE-UNIVERSITAET DUESSELDORF (DE)
5. TUNA GRASO SA (ES)
6. MINISTRY FOR RESOURCES AND RURAL AFFAIRS (MT)
7. ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH LIMITED (IL)
8. UNIVERSIDAD DE CADIZ (ES)
9. UNIVERSITA DEGLI STUDI DI BARI "ALDO MORO" (IT)
10. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
11. SKRETTING AQUACULTURE RESEARCH CENTRE AS (NO)
12. UNIVERSITE MONTPELLIER 2 SCIENCES ET TECHNIQUES (FR)
13. MFF LTD (MT)
14. CALADEROS DEL MEDITERRANEO S.L. (ES)

FP7-KBBE-2007-1

From capture based to self-sustained aquaculture

SELFDOTT

www.sites.google.com/site/selfdottpublic



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

SOCIOEC



Socio economic effects of management measures of the future CFP

SOCIOEC is an interdisciplinary, European wide project bringing together scientists from several fisheries sciences with industry partners and other key stakeholders to work in an integrated manner on solutions for future fisheries management, that can be implemented at a regional level. The central concept is to provide a mechanism for developing measures that are consistent with the overarching sustainability objectives of the EU, and that can provide consensus across all stakeholders. The first step will be to develop a coherent and consistent set of management objectives, which will address ecological; economic and social sustainability targets. The objectives should be consistent with the aims of the CFP, MSFD and other EU directives, but they should also be understandable by the wider stakeholder community and engage their support. This will then lead to the proposal of a number of potential management measures, based on existing or new approaches. The second step will be to analyze the incentives for compliance provided by these measures. In particular, we will examine fisher's responses and perceptions of these measures, based on historical analysis as well as direct consultation and interviews. This project part will also examine how the governance can be changed to facilitate self- and co-management to ensure fisher buy-in to promising management measures. In particular, the project will focus on the interpretation of overarching (i.e. EU) objectives in local and regional contexts. Finally, the project will examine the impacts of the management measures that emerge from this process, particularly in terms of their economic and social impacts. The IA analysis will be integrated by evaluating the proposed measures against the criteria of effectiveness, efficiency and coherence. Special attention will be paid in evaluating the proposed management measures' performance in terms of their ability to achieve the general and specific ecological objectives.

Socio-economic effects of the main management principles of the future Common Fishery Policy (CFP): impact of new policy framework and opportunities for the fishing sector to develop self- and co-management

www.socioec.eu

FP7-KBBE-2011-5

SOCIOEC



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,939.00

PROJECT N°

289192

DURATION

36 months

PROJECT START DATE

March 2012

LIST OF PARTNERS

1. JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FUER LANDLICHE RAUME, WALD UND FISCHEREI (DE)
2. AALBORG UNIVERSITET (DK)
3. KØBENHAVNS UNIVERSITET (DK)
4. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
5. DANMARKS TEKNISKE UNIVERSITET (DK)
6. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
7. AQUATT UETP LTD (IE)
8. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
9. ISTITUTO DI RICERCA ECONOMICA PER LA PESCA E L'AQUACOLTURA IREPA ONLUS ASSOCIAZIONE (IT)
10. HASKOLI ISLANDS (IS)
11. KARADENIZ TEKNİK UNIVERSİTESİ (TR)
12. UNIVERSITY OF PORTSMOUTH HIGHER EDUCATION CORPORATION (UK)
13. NATIONAL UNIVERSITY OF IRELAND, GALWAY (IE)
14. UNIVERSITE DE BRETAGNE OCCIDENTALE (FR)
15. CHRISTIAN-ALBRECHTS-UNIVERSITÄT ZU KIEL (DE)
16. MARINE INSTITUTE (IE)
17. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
18. JRC JOINT RESEARCH CENTRE - EUROPEAN COMMISSION (BE)
19. PECHEURS DE MANCHE ET D'ATLANTIQUE SA (FR)
20. KUTTERFISCH-ZENTRALE GMBH (DE)
21. A/S LAESO FISKEINDUSTRI (DK)
22. MARINE LAW AND OCEAN POLICY RESEARCH SERVICES LTD (IE)
23. DENNIS NISSEN (DE)
24. CLODIAMARE 1 SC (IT)
25. MEDITERRANEAN AQUAFARM SERVICES SL (ES)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

TARGETFISH



Targeted disease prophylaxis in European fish farming

European aquaculture production provides direct employment to 65 000 people with a turnover of 3 billion €. However, the lack of authorised veterinary medicinal products and the consequent disease outbreaks in farmed fish species costs the sector 20% of the production value. The most appropriate method for disease control, both on economical and ethical grounds, is disease prevention by vaccination. TargetFish will advance the development of existing (but not sufficient) and new prototype vaccines against socio-economically important viral or bacterial pathogens of Atlantic salmon, rainbow trout, common carp, sea bass, sea bream and turbot. The project will develop targeted vaccination strategies for currently sub-optimal and for novel vaccines. Improved vaccines will be brought closer to industrial application by addressing practical issues such as efficacy, safety and delivery route. TargetFish will also establish a knowledge- and technology-base for rational development of next generation fish vaccines.

To achieve these challenging tasks, we brought together 29 partners from 11 EU member states, 2 associated countries and 1 International Cooperation Partner Country (ICPC). In this large multidisciplinary consortium an approximate equal number of RTD and SME partners will cooperate closely while keeping an intensive communication with the large vaccine and nutrition industries via an Industry Forum. Specifically, TargetFish will 1) generate knowledge by studying antigens and adjuvants for mucosal routes of administration while analyzing the underpinning protective immune mechanisms; 2) validate this knowledge with response assays for monitoring vaccine efficacy and study safety aspects, including those associated with DNA vaccines; 3) approach implementation of prototype vaccines by optimizing vaccination strategies thus 4) shortening the route to exploitation. Thereby, this project will greatly enhance targeted disease prophylaxis in European fish farming.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,979.00

PROJECT N°

311993

DURATION

60 months

PROJECT START DATE

October 2012

LIST OF PARTNERS

1. WAGENINGEN UNIVERSITEIT (NL)
2. DANMARKS TEKNISKE UNIVERSITET (DK)
3. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
4. THE SCOTTISH MINISTERS ACTING THROUGH MARINE SCOTLAND (UK)
5. FRIEDRICH LOEFFLER INSTITUT. BUNDESFORSCHUNGSINSTITUT FUER TIERGESUNDHEIT (DE)
6. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
7. UNIVERSITAT AUTONOMA DE BARCELONA (ES)
8. UNIVERSITA DEGLI STUDI DELLA TUSCIA (IT)
9. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
10. NORGES VETERINAERHOGSKOLE (NO)
11. THE UNIVERSITY OF STIRLING (UK)
12. ISTITUTO ZOOPROFILATTICO SPERIMENTALE DELLE VENEZIE (IT)
13. KØBENHAVNS UNIVERSITET (DK)
14. VYZKUMNY USTAV VETERINARNIHO LEKARSTVI (CZ)
15. THE HEBREW UNIVERSITY OF JERUSALEM (IL)
16. UNIVERSIDAD DE MURCIA (ES)
17. TETHYS AQUACULTURE LIMITED (UK)
18. PATOGEN ANALYSE AS (NO)
19. FISHLAB HESTELABORATORIET (DK)
20. OSAUHING NAXO (EE)
21. RIDGEWAY BIOLOGICALS LIMITED (UK)
22. ROSSI INTERNATIONAL AS (DK)
23. INGENIATRICS TECNOLOGIAS S.L. INGEN (ES)
24. BIGDNA LTD (UK)
25. W 42 INDUSTRIAL BIOTECHNOLOGY GMBH (DE)
26. PANAGIOTIS CHRISTOFILOGIANNIS. IOANA TAVLA (EL)
27. CENTRO VETERINARIO Y AGRICOLA LIMITADA (CL)
28. DANSK AKVAKULTUR FORENING (DK)
29. BIOMAR A/S (DK)
30. BIOORGANIC RESEARCH AND SERVICES SA (ES)

FP7-KBBE-2012-6-singlestage

TARGETFISH



Prevention of important diseases of
farmed fish species

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-2 Increased sustainability of all productions systems
(fisheries and aquaculture)

TXOTX



Technical eXperts Overseeing Third country eXpertise

It is widely recognised that scientific efforts need to be coordinated to strengthen the knowledge base in support of policy-making in a global context. This is a complicated task that requires effective coordination and cooperation among States, RFOs and other agencies. States with an obligation to ensure sustainability of the resources they exploit should seek (i) to promote responsible fisheries and (ii) to promote good, coordinated scientific research. In the case of the EU, actions should be consistent with major international agreements (UNCLOS, CCRF, UNIA, WSSD) and contribute to improving coherence between different EU Policies. The purpose of this Coordination Action is to facilitate a coherent approach towards research directed at the assessment and management of fish resources. The targets are particularly those areas where the European fleet is fishing in international or third country waters, or where the EU has important development goals. Thus, the principal objectives of TXOTX are: To collate information from all RFMO/RFOs and Fisheries Partnership Agreements as well as selected additional regions of special interest (with emphasis on CPA areas) on the extent of scientific research programmes being undertaken by the various actors. To analyse the data available and methodologies applied in assessment and management procedures regionally, in order to identify data and research gaps and opportunities for greater research coordination that may be promoted by the EU in support to scientific advice to fisheries management. To develop recommendations on how to improve cooperation with third parties in order to enhance research and resource status. The TXOTX consortium proposes to build a network of scientists in countries with a strategic geographical distribution to produce a synthesis of data collection standards, assessment methods, management procedures that will be disseminated among participants, stakeholders and public in general.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,854.00

PROJECT N°

212188

DURATION

36 months

PROJECT START DATE

April 2008

LIST OF PARTNERS

1. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
2. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
3. IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE (UK)
4. INSTITUTO DE FOMENTO PESQUERO (CL)
5. STOCKHOLMS UNIVERSITET (SE)
6. UNIVERSITY OF CAPE TOWN (ZA)
7. COLDSTREAM HOLDINGS LTD TRADING AS NFDS AFRICA (BW)
8. SEYCHELLES FISHING AUTHORITY (SC)
9. INSTITUT NATIONAL DE RECHERCHE HALIEUTIQUE (MA)
10. UNIVERSITY OF DAR ES SALAAM (TZ)
11. TANZANIA FISHERIES RESEARCH INSTITUTE (TZ)

FP7-KBBE-2007-1

TXOTX

Improving research in support to scientific advice to
fisheries management outside EU waters

www.txotx.net



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-4 Socio-economic research and support to policies

AFSPAN



Aquaculture for Food Security, Poverty Alleviation and Nutrition

Aquaculture is widely considered as important for enhancing food security, alleviating poverty and improving nutrition. However, little information is available concerning the direct and indirect impacts of aquaculture on food security and poverty alleviation in most developing countries and LIFDCs. Strengthening the knowledge base surrounding aquaculture and food and nutrition security through this project will provide the evidence upon which sound resource allocation and strategies can be based, and subsequently plan, implement and coordinate efficiently development and research programmes supporting the sustainable expansion of aquaculture and increasing its impact to food security and poverty alleviation. The project is to be implemented by 18 partners in 11 selected LIFDCs, 3 EU partners, and 3 international organizations. The project will strengthen the knowledge base on food security and poverty and develop new methodologies or more rigorous methodologies to quantify the contribution of aquaculture in combating hunger and poverty in developing countries and LIFDCs. This will endeavour to better understand aquaculture's contribution to human development. Project partner countries were selected based on varied human development conditions and national level efforts in including aquaculture for improving national food security and alleviating poverty. They represent all major aquaculture regions and ICPCs where aquaculture has major contributions to national economy involve high numbers of small-scale aquaculture farms, and with high international trade of fish and fishery products. The results of the project will be brought to the attention of countries and development partners, particularly the EU, and outputs will help LIFDCs and various development partners to improve efficiency and coordination in development initiatives focused on aquaculture as a means of promoting food security and poverty alleviation.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,380.00

PROJECT N°

289760

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS FAO (IT)
2. INTERNATIONAL CENTER FOR LIVING AQUATIC RESOURCES (MY)
3. INSTITUTE OF DEVELOPMENT STUDIES (UK)
4. UNIVERSITY OF PORTSMOUTH HIGHER EDUCATION CORPORATION (UK)
5. KØBENHAVNS UNIVERSITET (DK)
6. UNIVERSITETET I STAVANGER (NO)
7. NETWORK OF AQUACULTURE CENTRES IN ASIA-PACIFIC (TH)
8. BANGLADESH FISHERIES RESEARCH FORUM (BD)
9. FRESHWATER FISHERIES RESEARCH CENTER OF CHINESE ACADEMY OF FISHERY SCIENCES (CN)
10. MINISTRY OF AGRICULTURE (IN)
11. SOUTHEAST ASIAN FISHERIES DEVELOPMENT CENTER (TH)
12. VIEN NGHIEN CUU NUOI TRONG THUY SAN1 (VN)
13. MINISTRY OF FISHERIES DEVELOPMENT (KE)
14. MAKERERE UNIVERSITY (UG)
15. UNIVERSITY OF ZAMBIA (ZM)
16. UNIVERSIDADE FEDERAL DO CEARA (BR)
17. PONTIFICIA UNIVERSIDAD CATOLICA DE VALPARAISO (CL)
18. UNIVERSIDAD CENTROAMERICANA ASOCIACION (NI)

FP7-KBBE-2011-5

AFSPAN



Role of aquaculture in improving food security
and eradicating poverty worldwide

<http://www.afspan.eu>



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-4 Socio-economic research and support to policies

AQUAINNOVA



Supporting governance and multi-stakeholder participation in aquaculture research and innovation

Aquainnova establishes an operational framework for dialogue based on best governance practises - between the aquaculture industry, the research community and policy makers, focusing on exploiting the potential for innovation and technological development in the European aquaculture value chain. It will actively promote the exploitation, dissemination and communication of Community aquaculture RTD research actions and results, looking to improve the manner in which the knowledge generated is efficiently and effectively managed, disseminated and transferred. This will be achieved by using expert groups working on different thematic areas of aquaculture and developing innovative methodologies for gap analysis and problem solving. These will be supported by sectoral benchmarking documents. Draft Vision Documents and Strategic Research Agendas will be the subject of multi-stakeholder consultation in regional workshops. Dissemination materials will include new technical summaries on Community RTD and interactive assessment of the benefits of RTD Projects. Active dissemination actions will include consumer organisations, CSOs and the professional and research communities. Improving knowledge transfer and uptake is a core component, applying effective communication channels, tools and resources for maximum impact. Aquainnova will develop and provide a structured and operational platform that will facilitate networking and consultation, while providing consensus on the associated Vision Documents, Strategic Research Agendas and Action Plans for implementation.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

988,954.00

PROJECT N°

245238

DURATION

30 months

PROJECT START DATE

February 2010

LIST OF PARTNERS

1. EUROPEAN AQUACULTURE TECHNOLOGY AND INNOVATION PLATFORM (BE)

FP7-KBBE-2009-3

AQUAINNOVA



Supporting governance in aquaculture
research and innovation

www.eatip.eu/default.asp?SHORTCUT=100



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-4 Socio-economic research and support to policies

AQUAMED



The future of research on aquaculture in the Mediterranean Region

The fast development of the Mediterranean aquaculture (freshwater, marine) is confronted to a set of difficulties e.g. inadequate production systems and competitiveness, interaction and space competition with other users and the need for a proper integration in the coastal zones, possible negative impact on the environment and negative image of the product quality. Aquaculture development in the Mediterranean countries is contrasted in terms of importance of the sector, domestic market demand, typology of the industry, and research and development structures and capacities. Consequently, a strategy for a knowledge-based development of the activity has to be implemented using a flexible and concerted approach. To deliver practical results, the AQUAMED project will be based on a four step process consisting in (1) mapping and setting a database of all relevant information (about policies, research and socio-economy) in each partner country, (2) identifying common situations and constraints between countries, (3) grouping countries confronted to similar driving forces in order to foster information exchanges and formulate more focussed science based recommendations and (4) setting up of a multi-stakeholder platform to promote a research organisation and an revolving implementation plan aiming at the sustainable development of aquaculture. The platform will be organised to be self-sustainable after the end of the project. It will be instrumental to rationalising research programming in order to avoid duplication, fragmentation and dispersion of research efforts, and to stimulate a long-term cooperation and coordination among policy makers, aquaculture industry and RTD performers in the Region. The Project consortium, covering most of the situations of the aquaculture sector met in Mediterranean, will put the emphasis on the participatory approach, the dissemination of the outcomes of the AQUAMED activities and the sustainability the multi-stakeholder platform.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

996,852.00

PROJECT N°

244999

DURATION

36 months

PROJECT START DATE

June 2010

LIST OF PARTNERS

1. EUROPEAN FISHERIES AND AQUACULTURE ORGANISATION (FR)
2. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
3. INSTITUTE OF OCEANOGRAPHY AND FISHERIES (HR)
4. INSTITUT NATIONAL DE RECHERCHE HALIEUTIQUE (MA)
5. THE AGRICULTURAL RESEARCH ORGANISATION OF ISRAEL. THE VOLCANI CENTRE (IL)
6. MINISTRY OF AGRICULTURE (LB)
7. INSTITUT NATIONAL DES SCIENCES ET TECHNOLOGIES DE LA MER (TN)
8. MINISTRY OF AGRICULTURE AND RURAL AFFAIRS, GENERAL DIRECTORATE OF AGRICULTURAL RESEARCHES, PISTACHIO RESEARCH INSTITUTE (TR)
9. NATIONAL INSTITUTE OF OCEANOGRAPHY AND FISHERIES (EG)
10. UNIVERSITE D'ANNABA. LABORATOIRE BIORESSOURCES MARINES (DZ)
11. AQUATT UETP LTD (IE)

FP7-KBBE-2009-3

AQUAMED



European
Commission

Consolidate alliances with the Mediterranean
in the field of aquaculture - Mandatory ICPC
(Mediterranean Partner Countries)

www.aquamedproject.net



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-4 Socio-economic research and support to policies

ASEM-AQUACULTURE09



ASEM Aquaculture Platform

This proposal builds on the outputs of the ASEM Aquaculture Platform, established in 2003 as an EU-Asia framework for dialogue, networking and continuing coordination for sustainable aquaculture development. From 2003-2006, 6 expert workshops targeted key topics (Disease; Health management, Biodiversity ; Ecological impacts, Breeding ; Domestication, Education, Food safety; Legislation, Food security) and yielded valuable recommendations on future directions in research, production and trade. With increasingly critical demands on aquaculture for food supply and food security, income and employment, the vulnerability of the natural resource issues involved, and the important gains to be realised through developing stronger scientific and economic partnerships between the two regions, the aim is to move more pro-actively into effective policy, into formulation of joint research goals, and into outcomes which contribute to Millennium Development and related goals. The project's major aim is to reconcile ecosystem and economic system demands to consolidate concepts of sustainability in aquaculture development in both regions. Specific actions include: 1) validation of earlier recommendations; 2) translating priority recommendations into concrete actions; 3) facilitate industry interaction between the two regions; 4) build and exchange knowledge and its application. The common denominator of the actions is the concerted effort to initiate joint EU-Asia processes which have impact on research excellence, contributing realistically and effectively to good production practice, improved governance, fair trade, social equity and sustainability. In developing these, the ASEM Aquaculture Platform will strengthen opportunities for the EU aquaculture sector to derive value from its technological and structural assets, and develop valuable trade partnerships, using the driver of import product quality to improve product quality and value in both markets.

FP7-KBBE-2009-3

ASEM-AQUA- CULTURE09

Consolidate alliances with Asia in the field of aquaculture - Mandatory ICPC (China and other ICPC from Asia)

www.asemaquaculture.org



PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

997,502.00

PROJECT N°

245020

DURATION

48 months

PROJECT START DATE

December 2009

LIST OF PARTNERS

1. UNIVERSITEIT GENT (BE)
2. THE UNIVERSITY OF STIRLING (UK)
3. WAGENINGEN UNIVERSITEIT (NL)
4. RESEARCH INSTITUTE FOR FISHERIES, AQUACULTURE AND IRRIGATION (HU)
5. NETWORK OF AQUACULTURE CENTRES IN ASIA-PACIFIC (TH)
6. SHANGHAI OCEAN UNIVERSITY (CN)
7. UNIVERSITI PUTRA MALAYSIA (MY)
8. CAN THO UNIVERSITY (VN)
9. EUROPEAN AQUACULTURE TECHNOLOGY AND INNOVATION PLATFORM (BE)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-4 Socio-economic research and support to policies

COMFISH



Strengthening the impact of fisheries related research through dissemination, communication and technology transfer

ComFish takes the view that it is not sufficient to focus on pressing issues in fisheries or on communication impasses between stakeholders in isolation (scientists industry policy makers). A broader view is necessary, and this is very much in line with the ecosystem approach of the revision of the Common Fisheries Policy to be implemented in 2012. In this frame of mind, ComFish aims to identify important fisheries topics with long term impacts and ascertain whether scientific results have been properly communicated to fisheries stakeholders. If yes, why and how was this done? If not, then the question must be answered which communication needs must be addressed. What are the related challenges, needed actions and possible solutions? ComFish will identify these topics and through five regional participatory stakeholder events address these communication impasses. Next, ComFish will use the outcome of the events to prepare Information Packages, that include audio-visual materials, and communicate the identified priority issues to a wider circle of stakeholders as well as to EU citizens. Finally, ComFish will organise a Partnering Event to facilitate network building amongst stakeholders, to jointly address and overcome communication impasses and to stimulate collaborations. All activities are supported by a robust science based impact analysis. ComFish has nine partners in eight EU countries: four are communication specialists and five are institutions engaged in marine research and policy advice. The project benefits from an extensive Advisory Board with representation from all major fisheries stakeholders in Europe as well as over 40 Project Associated Members, mostly FP6/FP7 research project co-ordinators.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,565.00

PROJECT N°

289610

DURATION

36 months

PROJECT START DATE

February 2012

LIST OF PARTNERS

1. LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN (DE)
2. PROBIO PARTNERS VOF (NL)
3. VISIONS UNLIMITED MEDIEN (DE)
4. INTERNATIONAL ORGANISATION FOR THE DEVELOPMENT OF FISHERIES IN EASTERN AND CENTRAL EUROPE*EUROFISH (DK)
5. MORSKI INSTYTUT RYBACKI. PANSTWOWY INSTYTUT BADAWCZY (PL)
6. HAVFORSKNINGSINSTITUTTET (NO)
7. INSTITUTO ESPANOL DE OCEANOGRAFIA (ES)
8. ISTITUTO DI RICERCHE ECONOMICHE PER LA PESCA E L'AQUACOLTURA IREPA ONLUS ASSOCIAZIONE (IT)
9. INSTITUTE OF FISHING RESOURCES (BG)

FP7-KBBE-2011-5

COMFISH



Strengthening the impact of fisheries related research through dissemination, communication and technology transfer

www.eusem.com/main/ComFish/comfish



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-4 Socio-economic research and support to policies

CREAM



Coordinating research in support to application of EAF (Ecosystem Approach to Fisheries) and management advice in the Mediterranean and Black Seas

The Coordinating Action (hereafter “the project”) will establish an effective collaboration network among key role players in Mediterranean and Black Sea fisheries research and management. The participants in the project include national research institutes from Mediterranean and Black Sea countries with a long history and active participation in fisheries research and assessment, who provide advice to national, regional and international fisheries management organisms. The project will seek the active collaboration of regional and international fisheries management organisms as external participants in the project, in order to identify the gaps (in terms of data, knowledge, training, coordination) which hamper at present the full application of the Ecosystem Approach in the management of Mediterranean and Black Sea fisheries. The project will have a strong training and capacity building component in order to help harmonize data collection and methodologies used in fisheries assessment and management in the Mediterranean and Black Sea. The project will serve to establish the guidelines for the application of the Ecosystem Approach to Fisheries in the Mediterranean and Black Sea, both in EU member states and third countries. The project is organized in 6 workpackages: i) Project Coordination ii) Review of current knowledge in data collection and methodological practices in assessment and management iii) Identification of data needs, quality, harmonization, methodologies and models for EAF iv) Establishing coordination with the assessment and management international/regional bodies v) Training and capacity building. Symposium. Dissemination component vi) Strengthening the scientific basis of EAF application in Mediterranean and Black Sea fisheries.

FP7-KBBE-2010-4

CREAM



Improving research in support to scientific advice to fisheries management in the Mediterranean and Black Seas – Mandatory ICPC (Mediterranean Partner Countries and Black Sea region)

www.cream-fp7.eu



PROJECT COORDINATOR

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FUNDING SCHEME CSA

EC CONTRIBUTION € 999,137.00

PROJECT N° 265648

DURATION 36 months

PROJECT START DATE May 2011

LIST OF PARTNERS

1. MEDITERRANEAN AGRONOMIC INSTITUTE OF ZARAGOZA / INTERNATIONAL CENTRE FOR ADVANCED MEDITERRANEAN AGRONOMIC STUDIES (ES)
2. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
3. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
4. CONSORZIO PER IL CENTRO INTERUNIVERSITARIO DI BIOLOGIA MARINA ED ECOLOGIA APPLICATA G. BACCI (IT)
5. UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA (IT)
6. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
7. INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT (FR)
8. INSTITUTO ESPANOL DE OCEANOGRAFIA (ES)
9. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
10. INSTITUT NATIONAL DE RECHERCHE HALIEUTIQUE (MA)
11. INSTITUT NATIONAL DES SCIENCES ET TECHNOLOGIES DE LA MER (TN)
12. EGE UNIVERSITESI (TR)
13. INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE MARINA GRIGORE ANTIPA (RO)
14. INSTITUTE OF OCEANOLOGY, BULGARIAN ACADEMY OF SCIENCES (BG)
15. RUSSIAN FEDERAL RESEARCH INSTITUTE OF FISHERIES AND OCEANOGRAPHY (RU)
16. SOUTHERN SCIENTIFIC RESEARCH INSTITUTE OF MARINE FISHERIES AND OCEANOGRAPHY (UA)
17. ALEXANDRIA UNIVERSITY (EG)
18. INSTITUTE OF OCEANOGRAPHY AND FISHERIES (HR)
19. AMERICAN UNIVERSITY OF BEIRUT (LB)
20. MINISTRY FOR RESOURCES AND RURAL AFFAIRS (MT)
21. MINISTRY OF AGRICULTURE, NATURAL RESOURCES AND ENVIRONMENT OF CYPRUS (CY)
22. WATER ECOLOGY AND FISHERIES RESEARCH INSTITUTE UNION (GE)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-4 Socio-economic research and support to policies

DEEPFISHMAN



Management and monitoring of deep-sea fisheries and stocks

Deepwater fisheries pose particular difficulties for management. Target species are difficult to assess with high levels of uncertainty, they are generally vulnerable to overfishing and sustainable levels of exploitation are low. Ecosystems are impacted by fishing due to the removal of target species, bycatch of numerous fish and other organisms and the crushing of benthos such as e.g. cold water coral and large sponges. However, the impact of fishing on the deepwater ecosystem in general is poorly quantified. DEEPFISHMAN will develop a range of strategy options for the management of deepwater fisheries in the NE Atlantic that will take account of these factors. Firstly, the aim will be to identify new and more effective assessment methods, reference points, control rules and management strategies to be used in the short term, making better use of available data. Secondly, a reliable long-term framework will be developed for which additional data needs will be specified in order to fill current information gaps to achieve reliable long-term management requirements. This work will be developed by examining a range of case studies selected to reflect the different types of deepwater fishery found in the NE Atlantic. In addition two case studies outside the NE Atlantic are selected to give a wider perception of the management and monitoring of deepwater fisheries elsewhere in the world. For each case study current problems with assessment or management will be identified and new methods will be developed and tested. Recommendations for future methods and approaches will be made. The socio-economic profile and projected impact of the management strategy options as applied both through a short- and long-term framework will be examined for selected fisheries. In this way the project outputs will aim to provide robust guidelines for deepwater fisheries management suitable for adoption within the Common Fishery policy. The work will involve an ICPC country.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,924,156.00

PROJECT N°

227390

DURATION

36 months

PROJECT START DATE

April 2009

LIST OF PARTNERS

1. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
2. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
3. HASKOLI ISLANDS (IS)
4. HAVFORSKNINGSINSTITUTTET (NO)
5. IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE (UK)
6. MINISTRY OF FISHERIES AND MARINE RESOURCES (NA)
7. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
8. INSTITUTO NACIONAL DE RECURSOS BIOLÓGICOS I.P. INRB (PT)
9. MARINE INSTITUTE (IE)
10. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
11. INSTITUTO ESPAÑOL DE OCEANOGRAFIA (ES)
12. HAFRANNSOKNASTOFNUNIN (IS)
13. UNIVERSITY OF PORTSMOUTH HIGHER EDUCATION CORPORATION (UK)

FP7-KBBE-2008-2B

Deep sea fisheries management

DEEPFISHMAN

www.ifremer.fr/deepfishman



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-4 Socio-economic research and support to policies

ECOFISHMAN



Ecosystem-based Responsive Fisheries Management in Europe

EcoFishMan seeks to develop a responsive fisheries management system (RFMS) based on results-based management (RBM) principles. The intended context of application of the RFMS is complex, mixed-fisheries and multi-stakeholder fishery sectors like those found in the EU/Common Fisheries Policy (CFP) area. It will be an ecosystem-based sustainable management system under a precautionary framework that will define maximum acceptable negative impact, target elimination of discards and maintain economic and social viability. EcoFishMan is a multidisciplinary project, involving scientists and stakeholders in activities relating to biology, stock assessment, technology, economy, sociology and legal aspects of fisheries management. The work starts with a review on existing results-based management systems (RBMS), the CFP and tools that aid fisheries management. The next step is identification of outcome targets and development of relevant indicators, which are then visualised through development of a GIS based decision support tool. The RFMS will be designed, developed and evaluated in collaboration between scientists and stakeholders and tested through simulated case studies. This will take place in an iterative process (spiral model) to ensure that the RFMS is adaptive to different types of fisheries and changes in the environment. A roadmap will be produced for the implementation and maintenance of recommendations in the system. In the RFMS, stakeholder involvement is essential and through their active involvement in the development of the system, EcoFishMan aims at improving cooperation and mutual understanding between scientists, policy makers and other stakeholders. Top-down management strategies will be combined with a co-management and bottom-up approach that aims to shift the burden of proof and to involve and benefit stakeholders, offering a fundamentally new approach to fisheries management in Europe.

PROJECT COORDINATOR

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- MATIS OHF (IS)

FUNDING SCHEME

CP

EC CONTRIBUTION €

3,000,000.00

PROJECT N°

265401

DURATION

36 months

PROJECT START DATE

March 2011

LIST OF PARTNERS

1. MATIS OHF (IS)
2. INTERNATIONAL ORGANISATION FOR THE DEVELOPMENT OF FISHERIES IN EASTERN AND CENTRAL EUROPE*EUROFISH (DK)
3. CENTRO TECNOLOGICO DEL MAR. FUNDACION CETMAR (ES)
4. BITLAND ENTERPRISE APS (DK)
5. HASKOLI ISLANDS (IS)
6. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
7. NOFIMA AS (NO)
8. UNIVERSITETET I TROMSOE (NO)
9. CENTRO DE CIENCIAS DO MAR DO ALGARVE (PT)
10. INSTITUTO NACIONAL DE RECURSOS BIOLÓGICOS I.P. INRB (PT)
11. MAPIX TECHNOLOGIES LTD (UK)
12. THE SCOTTISH MINISTERS ACTING THROUGH MARINE SCOTLAND (UK)
13. SEA FISH INDUSTRY AUTHORITY (UK)
14. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
15. SP/F SYNTESA (FO)

FP7-KBBE-2010-4

ECOFISHMAN



Using results-based management to
achieve CFP objectives

www.ecofishman.com/



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-4 Socio-economic research and support to policies

JAKFISH



Judgement and Knowledge in Fisheries including Stakeholders

The project will investigate how different actors in the marine sector, including fisheries, make use of scientific knowledge, how the roles that scientists play help formulate policies and how governance approaches can be developed which enable policy decisions to address uncertainty and complexity based on research and with the participation of stakeholders. The project will collect and build on experiences from a diverse range of EU policy areas which address interactions between human activities and nature. The main objectives of the proposal are to examine and develop the institutions, practices and tools that allow complexity and uncertainty to be dealt with effectively within participatory decision making processes. The proposal will develop these institutions, practices and tools in respect to European marine management with a particular focus on fish harvesting and marine spatial planning via two linked strategies. Where Strategy One is to develop tools to facilitate participatory decision making processes based on recently developed bio-economic modeling techniques. While Strategy Two carries out a sociological analysis of the practices and institutional forms that can most effectively involve the wider community in debates over developing science-based policies.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,775,876.00

PROJECT N°

212969

DURATION

36 months

PROJECT START DATE

May 2008

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. TARTU ULIKOOL (EE)
3. DANMARKS TEKNISKE UNIVERSITET (DK)
4. HELSINGIN YLIOPISTO (FI)
5. HAVFORSKNINGSINSTITUTTET (NO)
6. UNIVERSITY OF PORTSMOUTH HIGHER EDUCATION CORPORATION (UK)
7. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
8. AALBORG UNIVERSITET (DK)
9. DIALOGIK GEMEINNUETZIGE GESELLSCHAFT FUER KOMMUNIKATIONS- UND KOOPERATIONSFORSCHUNG MBH (DE)
10. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)

FP7-KBBE-2007-1

JAKFISH



Addressing uncertainty and complexity – governance
for fisheries management

www.surfgroepen.nl/sites/jakfish/default.aspx



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-4 Socio-economic research and support to policies

MEFEPO



Making the European Fisheries Ecosystem Operational

Since the reform of the EU Common Fisheries Policy in 2002, effort has been devoted to addressing the governance, scientific, social and economic issues required to introduce an ecosystem approach to European marine fisheries. Fisheries management needs to support the ‘three pillars of sustainability’ (ecological, social and economic). Fisheries Ecosystem Plans (FEPs) were developed to further the ecosystem approach in fisheries management and as a tool to assist managers consider the ecological, social and economic implications of their decisions. The FP5-funded European Fisheries Ecosystem Plan (EFEP) project developed a FEP for European waters, using the North Sea as a case study. The core concept of the Making the European Fisheries Ecosystem Plan Operational (MEFEPO) project is the delivery of an operational framework for three regional seas. This is the necessary next step in the process. Furthermore, MEFEPO will, based on the lessons learned consider how FEPs can be made operational and developed for other regional areas. MEFEPO will focus on how best to make current institutional frameworks responsive to an ecosystem approach to fisheries management at regional and pan-European levels in accordance with the principles of good governance. This will involve developing new linkages and means of allowing dialogue between the disparate groups of stakeholders, the integration of the considerable body of ecological, fisheries, social and economic research which has been developed in recent years and investigate how existing institutional frameworks need to evolve to incorporate this information and develop both dialogue between the disparate groups of marine stakeholders and develop a decision-making process which integrates a wide breadth of interests. The three areas used by MEFEPO will be the North Sea RAC, North-western Waters RAC and South-western Waters RAC areas.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,909.00

PROJECT N°

212881

DURATION

36 months

PROJECT START DATE

September 2008

LIST OF PARTNERS

1. THE UNIVERSITY OF LIVERPOOL (UK)
2. INSTITUTO NACIONAL DE RECURSOS BIOLÓGICOS I.P. INRB (PT)
3. UNIVERSITE DE BRETAGNE OCCIDENTALE (FR)
4. MARINE INSTITUTE (IE)
5. UNIVERSITETET I TROMSOE (NO)
6. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
7. AALBORG UNIVERSITET (DK)
8. IMAR- INSTITUTO DO MAR (PT)
9. INSTITUTO ESPAÑOL DE OCEANOGRAFIA (ES)
10. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

FP7-KBBE-2007-1

MEFEPO



Governance for an operational regional ecosystem approach to fisheries management

www.liv.ac.uk/mefepo



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-4 Socio-economic research and support to policies

TRANSDOTT



Translation of domestication of thunnus thynnus into an innovative commercial application

Due to declining stocks and increased fishing pressure there are serious concerns that the present fisheries and fattening industry for Bluefin Tuna (*Thunnus thynnus*) is not sustainable and that every effort should be made to develop BFT aquaculture. TRANSDOTT represents a “top-down” approach from five SMEs and three non SMEs to build on the scientific results obtained from two previous projects REPRODOTT in (FP5) and SELFDOTT (FP7) and to translate them into a commercially viable innovative marketable application for tuna aquaculture. Starting in April 2012, based on an already established broodstock in a central Mediterranean major SME in Malta, fertilized tuna eggs will be provided in June 2012 and 2013 for larval rearing in three industrial scale hatchery SME 's for rearing scenarios in Spain, Israel and Italy together with two experimental hatcheries in Malta and Israel. RTD will involve the validation of existing protocols with the generation of fingerlings in late summer to be transferred from the industrial hatcheries to grow- out sea cages. Previously tried and tested, successful weaning and grow-out diets from SELFDOTT will be supplied by Skretting Aquaculture Research Centre. The economic viability of these methodologies will be studied and used for the development of commercialization and capitalization of this process to provide sustainable Tuna Aquaculture.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

892,196.00

PROJECT N°

311904

DURATION

24 months

PROJECT START DATE

April 2012

LIST OF PARTNERS

1. HEINRICH-HEINE-UNIVERSITAET DUESSELDORF (DE)
2. MINISTRY FOR RESOURCES AND RURAL AFFAIRS (MT)
3. ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH LIMITED (IL)
4. MFF LTD (MT)
5. FUTUNA BLUE ESPAÑA SL (ES)
6. ARDAG COOPERATIVE AGRICULTURAL SOCIETY LTD (IL)
7. PANITTICA PUGLIESE. SOCIETA' AGRICOLA SPA (IT)
8. SKRETTING AQUACULTURE RESEARCH CENTRE AS (NO)

FP7-KBBE-2012-6-singlestage

TRANSDOTT



Boosting the translation of FP projects' results into innovative applications in the field of agriculture, forestry, fisheries and aquaculture

Website not available yet



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-5 The Ocean of Tomorrow

ACCESS



Arctic Climate Change, Economy and Society

The Arctic is engaged in a deep climatic evolution. This evolution is quite predictable at short (year) and longer scales (several decades), but it is the decadal intermediate scale that is the most difficult to predict. This is because the natural variability of the system is large and dominant at this scale, and the system is highly non linear due to positive and negative feedback between sea ice, the ocean and atmosphere. Already today, due to the increase of the GHG concentration in the atmosphere and the amplification of global warming in the Arctic, the impacts of climate change in the region are apparent, e.g. in the reduction in sea ice, in changes in weather patterns and cyclones or in the melting of glaciers and permafrost. It is therefore not surprising that models clearly predict that Arctic sea ice will disappear in summer within 20 or 30 years, yielding new opportunities and risks for human activities in the Arctic. This climatic evolution is going to have strong impacts on both marine ecosystems and human activities in the Arctic. This in turn has large socioeconomic implications for Europe. ACCESS will evaluate climatic impacts in the Arctic on marine transportation (including tourism), fisheries, marine mammals and the extraction of hydrocarbons for the next 20 years; with particular attention to environmental sensitivities and sustainability. These meso-economic issues will be extended to the macro-economic scale in order to highlight trans-sectoral implications and provide an integrated assessment of the socio-economic impact of climate change. An important aspect of ACCESS, given the geostrategic implication of Arctic state changes, will be the consideration of Arctic governance issues, including the framework UNCLOS (United Nations Convention for the Law of the Sea). ACCESS dedicates a full work package to integrate Arctic climate changes, socioeconomic impacts and Arctic governance issues.

PROJECT COORDINATOR

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FUNDING SCHEME CP

EC CONTRIBUTION € 10,978,468.00

PROJECT N° 265863

DURATION 48 months

PROJECT START DATE March 2011

LIST OF PARTNERS

1. UNIVERSITE PIERRE ET MARIE CURIE. PARIS 6 (FR)
2. O.A. SYS. OCEAN ATMOSPHERE SYSTEMS GMBH (DE)
3. NATURAL ENVIRONMENT RESEARCH COUNCIL (UK)
4. INSTITUT FUR WELTWIRTSCHAFT (DE)
5. THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE (UK)
6. ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG (DE)
7. SCHWARZ JOACHIM REINHOLD FRANZ (DE)
8. NOFIMA MARIN AS (NO)
9. HAMBURGISCHE SCHIFFBAU-VERSUCHSANSTALT GMBH (DE)
10. NORSK POLARINSTITUTT (NO)
11. METEOROLOGISK INSTITUTT (NO)
12. FASTOPT GMBH (DE)
13. THE SCOTTISH ASSOCIATION FOR MARINE SCIENCE (UK)
14. KUNGLIGA VETENSKAPSAKADEMIEN (SE)
15. P.P. SHIRSHOV INSTITUTE OF OCEANOLOGY OF RUSSIAN ACADEMY OF SCIENCES (RU)
16. IMPAC OFFSHORE ENGINEERING GMBH (DE)
17. UNIVERSITAT POLITECNICA DE CATALUNYA (ES)
18. DEUTSCHES ZENTRUM FUER LUFT. UND RAUMFAHRT EV (DE)
19. ARCTIC AND ANTARCTIC RESEARCH INSTITUTE (RU)
20. ECONOMIC AND SOCIAL RESEARCH INSTITUTE (IE)
21. LAPIN YLIOPISTO (FI)
22. SINTEF FISKERI OG HAVBRUK AS (NO)
23. CICERO SENTER KLIMAFORSKNING STIFTELSE (NO)
24. STIFTELSEN SINTEF (NO)
25. GESELLSCHAFT ZUR FORDERUNG DES ENERGIEWIRTSCHAFTLICHEN INSTITUTS AN DER UNIVERSITAT ZU KOLN GMBH. EWI (DE)
26. LE CERCLE POLAIRE ASSOCIATION (FR)
27. BELUGA SHIPPING GMBH (DE)
28. NORDIC BULK CARRIERS AS (DK)

FP7-OCEAN-2010

ACCESS



Quantification of climate change impacts on economic sectors in the Arctic

www.access-eu.org



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-5 The Ocean of Tomorrow

COCONET

Towards COast to COast NETworks of marine protected areas (from the shore to the high and deep sea), coupled with sea-based wind energy potential.

The project will identify groups of putatively interconnected MPAs in the Mediterranean and the Black Seas, shifting from local (single MPA) to regional (network of MPAs) and basin (network of networks) scales. The identification of physical and biological connections will clear the processes that govern patterns of biodiversity distribution. This will enhance policies of effective environmental management, also to ascertain if the existing MPAs are sufficient for ecological networking and to suggest how to design further protection schemes, based on effective exchanges between protected areas. The coastal focus will be widened to off shore and deep sea habitats, comprising them in MPAs networks. These activities will also individuate areas where Offshore Wind Farms might become established, avoiding too sensitive habitats but acting as stepping stones through MPAs. Socioeconomic studies will integrate to knowledge-based environmental management aiming at both environmental protection (MPAs) and clean energy production (OWF). Current legislations are crucial to provide guidelines to find legal solutions to problems on the use of maritime space. Two pilot projects (one in the Mediterranean Sea and one in the Black Sea) will test in the field the assumptions of theoretical approaches. The project covers a high number of Countries and involves researchers covering a vast array of subjects, developing a timely holistic approach and integrating the Mediterranean and Black Seas scientific communities through intense collective activities and a strong communication line with stakeholders and the public at large. The project will produce the guidelines to design, manage and monitor networks of MPAs, and an enriched wind atlas for both the Mediterranean and the Black Seas, creating a permanent network of excellent researchers (e.g. with summer schools) that will work together also in the future, making their expertise available to their Countries and to the European Union.

FP7-OCEAN-2011

COCONET



Knowledge-base and tools for regional networks of MPAs, integrated management of activities together with assessment of wind energy potential in the Mediterranean and the Black Sea

www.coconet-fp7.eu



PROJECT COORDINATOR

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FUNDING SCHEME CP

EC CONTRIBUTION € 9,000,000.00

PROJECT N° 287844

DURATION 48 months

PROJECT START DATE February 2012

LIST OF PARTNERS

1. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
2. CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LE SCIENZE DEL MARE (IT)
3. 3E N.V. (BE)
4. UNIVERSITY OF THE AEGEAN-RESEARCH UNIT (EL)
5. CLU SRL (IT)
6. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
7. COISPA TECNOLOGIA & RICERCA SCARL (IT)
8. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
9. DANMARKS TEKNISKE UNIVERSITET (DK)
10. INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU GEOLOGIE SI GEOECOLOGIE MARINA-GEOECOMAR (RO)
11. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
12. INSTITUT PO BIORAZNOOBRAZIE I EKOSISTEMNI IZSLEDVANIYA BALGARSKA AKADEMIYA NA NAUKITE (BG)
13. INSTITUTO ESPANOL DE OCEANOGRAFIA (ES)
14. UNIVERSIDAD DE CANTABRIA (ES)
15. INSTITUT NATIONAL AGRONOMIQUE DE TUNISIE (TN)
16. INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE MARINA GRIGORE ANTIPA (RO)
17. ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH LIMITED (IL)
18. ISTANBUL UNIVERSITY (TR)
19. MIDDLE EAST TECHNICAL UNIVERSITY (TR)
20. MARINE HYDROPHYSICAL INSTITUTE. UKRAINIAN NATIONAL ACADEMY OF SCIENCES (UA)
21. NATUREBUREAU LIMITED (UK)
22. THE NATIONAL ENVIRONMENTAL AGENCY (GE)
23. NENUPHAR SARL (FR)
24. STIFTELSEN NANSEN SENTER FOR FJERNMAALING (NO)
25. NATIONAL INSTITUTE OF OCEANOGRAPHY AND FISHERIES (EG)
26. ODESSA BRANCH INSTITUTE OF BIOLOGY OF SOUTHERNS SEAS NATIONAL ACADEMY OF SCIENCE OF UKRAINE (UA)
27. P.P. SHIRSHOV INSTITUTE OF OCEANOLOGY OF RUSSIAN ACADEMY OF SCIENCES (RU)
28. UNIVERSITY OF ZADAR (HR)
29. FONDACIONI ZOJA E KESHILLIT TE MIRE (AL)
30. UNIVERSITA TA MALTA (MT)
31. JAVNA USTANOVA UNIVERZITET CRNE GORE PODGORICA (ME)
32. UNIVERSITAET ROSTOCK (DE)
33. SOFIJSKI UNIVERSITET SVETI KLIMENT OHRIDSKI (BG)
34. UNIVERSITE DU SUD TOULON VAR (FR)
35. INSTITUTE OF OCEANOLOGY. BULGARIAN ACADEMY OF SCIENCES (BG)
36. UKRAINIAN SCIENTIFIC CENTRE OF ECOLOGY OF THE SEA (UA)
37. A. O. KOVALEVSKIY INSTITUTE OF BIOLOGY OF SOUTHERN SEAS (UA)
38. RUSSIAN STATE HYDROMETEOROLOGICAL UNIVERSITY (RU)
39. SINOP UNIVERSITY* SINOP FISHERIES FACULTY SNU FF (TR)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-5 The Ocean of Tomorrow

VECTORS

Vectors of Change in Oceans and Seas Marine Life, Impact on Economic Sectors

Marine life makes a substantial contribution to the economy and society of Europe. VECTORS will elucidate the drivers, pressures and vectors that cause change in marine life, the mechanisms by which they do so, the impacts that they have on ecosystem structures and functioning, and on the economics of associated marine sectors and society. VECTORS will particularly focus on causes and consequences of invasive alien species, outbreak forming species, and changes in fish distribution and productivity. New and existing knowledge and insight will be synthesised and integrated to project changes in marine life, ecosystems and economies under future scenarios for adaptation and mitigation in the light of new technologies, fishing strategies and policy needs. VECTORS will evaluate current forms and mechanisms of marine governance in relation to the vectors of change. Based on its findings, VECTORS will provide solutions and tools for relevant stakeholders and policymakers, to be available for use during the lifetime of the project. The project will address a complex array of interests comprising areas of concern for marine life, biodiversity, sectoral interests, regional seas, and academic disciplines as well as the interests of stakeholders. VECTORS will ensure that the links and interactions between all these areas of interest are explored, explained, modelled and communicated effectively to the relevant stakeholders. The VECTORS consortium is extremely experienced and genuinely multidisciplinary. It includes a mixture of natural scientists with knowledge of socio-economic aspects, and social scientists (environmental economists, policy and governance analysts and environmental law specialists) with interests in natural system functioning. VECTORS is therefore fully equipped to deliver the integrated interdisciplinary research required to achieve its objectives with maximal impact in the arenas of science, policy, management and society.

FP7-OCEAN-2010

VECTORS



European
Commission

Vectors of changes in marine life,
impact on economic sectors

www.marine-vectors.eu



PROJECT COORDINATOR

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FUNDING SCHEME CP

EC CONTRIBUTION € 12,484,835.00

PROJECT N° 266445

DURATION 48 months

PROJECT START DATE February 2011

LIST OF PARTNERS

1. PLYMOUTH MARINE LABORATORY (UK)
2. THE UNIVERSITY COURT OF THE UNIVERSITY OF ST ANDREWS (UK)
3. ACONDICIONAMIENTO TERRASENSE ASSOCIACION (ES)
4. CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LE SCIENZE DEL MARE (IT)
5. JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FUER LANDLICHE RAUME, WALD UND FISCHEREI (DE)
6. UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN (IE)
7. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
8. TARTU ULIKOOL (EE)
9. WAGENINGEN UNIVERSITEIT (NL)
10. STICHTING DELTARES (NL)
11. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
12. UNIVERSITY OF HULL (UK)
13. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
14. ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH LIMITED (IL)
15. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
16. AALBORG UNIVERSITET (DK)
17. UNIVERSITA DI PISA (IT)
18. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
19. FONDAZIONE ENI ENRICO MATTEI (IT)
20. UNIVERSITAET HAMBURG (DE)
21. DANMARKS TEKNISKE UNIVERSITET (DK)
22. GOLLASCH STEPHAN, GOLLASCH CONSULT (DE)
23. UNIVERSITE DE BRETAGNE OCCIDENTALE (FR)
24. BANGOR UNIVERSITY (UK)
25. KLAIPEDOS UNIVERSITETAS (LT)
26. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
27. INSTYTUT OCEANOLOGII. POLSKIEJ AKADEMII NAUK (PL)
28. KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN. KNAW (NL)
29. SIR ALISTER HARDY FOUNDATION FOR OCEAN SCIENCE (UK)
30. UNIVERSITA DEGLI STUDI DI PAVIA (IT)
31. INSTITUT SUPERIEUR DES SCIENCES AGRONOMIQUES, AGROALIMENTAIRES, HORTICOLES ET DU PAYSAGE (FR)
32. UNIVERSITE DE ROUEN (FR)
33. COMMUNITY OF EUROPEAN SHIPYARDS ASSOCIATIONS ASBL (BE)
34. UNIVERZA V LJUBLJANI (SI)
35. ISTITUTO NAZIONALE DI OCEANOGRAFIA E DI GEOFISICA SPERIMENTALE OGS (IT)
36. INSTITUT FUER OSTSEEFORSCHUNG WARNEMUENDE AN DER UNIVERSITAET ROSTOCK (DE)
37. AARHUS UNIVERSITET (DK)
38. COMMISSION INTERNATIONALE POUR L'EXPLORATION SCIENTIFIQUE DE LA MER MEDITERRANEE (CIEM) (MC)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-5 The Ocean of Tomorrow

PERSEUS

Protection of European seas and borders through the intelligent use of surveillance

The overall scientific objectives of PERSEUS are to identify the interacting patterns of natural and human-derived pressures on the Mediterranean and Black Seas, assess their impact on marine ecosystems and, using the objectives and principles of the Marine Strategy Framework Directive as a vehicle, to design an effective and innovative research governance framework based on sound scientific knowledge. Well-coordinated scientific research and socio-economic analysis will be applied at a wide-ranging scale, from basin to coastal. The new knowledge will advance our understanding on the selection and application of the appropriate descriptors and indicators of the MSFD. New tools will be developed in order to evaluate the current environmental status, by way of combining monitoring and modelling capabilities and existing observational systems will be upgraded and extended. Moreover, PERSEUS will develop a concept of an innovative, small research vessel, aiming to serve as a scientific survey tool, in very shallow areas, where the currently available research vessels are inadequate.

In view of reaching Good Environmental Status (GES), a scenario-based framework of adaptive policies and management schemes will be developed. Scenarios of a suitable time frame and spatial scope will be used to explore interactions between projected anthropogenic and natural pressures. A feasible and realistic adaptation policy framework will be defined and ranked in relation to vulnerable marine sectors/groups/regions in order to design management schemes for marine governance. Finally, the project will promote the principles and objectives outlined in the MSFD across the SES.

FP7-OCEAN-2011

PERSEUS

Policy-oriented marine Environmental
Research in the Southern European Seas

www.perseus-net.eu



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

12,973,123.40

PROJECT N°

287600

DURATION

48 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
2. MIDDLE EAST TECHNICAL UNIVERSITY (TR)
3. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
4. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
5. CONSORZIO NAZIONALE INTERUNIVERSITARIO PER LE SCIENZE DEL MARE (IT)
6. INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU GEOLOGIE SI GEOECOLOGIE MARINA-GEOECOMAR (RO)
7. PLAN BLEU POUR L'ENVIRONNEMENT ET LE DEVELOPPEMENT EN MEDITERRANEE (FR)
8. COSNAV ENGINEERING SRL (IT)
9. UNIVERSITA TA MALTA (MT)
10. EIR SYMVOULOI ANAPTYXIS ETAIREIA PERIORISMENIS EFTHYNIS (EL)
11. BC3 BASQUE CENTRE FOR CLIMATE CHANGE. KLIMA ALDAKETA IKERGA (ES)
12. INSTITUTO ESPAÑOL DE OCEANOGRAFIA (ES)
13. UNIVERSITAT DE BARCELONA (ES)
14. UNIVERSITAT POLITÈCNICA DE CATALUNYA (ES)
15. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
16. UNIVERSITE D'AIX MARSEILLE (FR)
17. UNIVERSITE PIERRE ET MARIE CURIE. PARIS 6 (FR)
18. UNIVERSITE PAUL SABATIER TOULOUSE III (FR)
19. CENTRO EURO-MEDITERRANEO PER I CAMBIAMENTI CLIMATICI SCARL (IT)
20. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
21. AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE, L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE (IT)
22. JRC-JOINT RESEARCH CENTRE - EUROPEAN COMMISSION (BE)
23. ISTITUTO NAZIONALE DI OCEANOGRAFIA E DI GEOFISICA SPERIMENTALE. OGS (IT)
24. STAZIONE ZOOLOGICA ANTON DOHRN (IT)
25. PLYMOUTH MARINE LABORATORY (UK)
26. UNIVERSITY OF PLYMOUTH (UK)
27. STICHTING DELTARES (NL)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-5 The Ocean of Tomorrow

PERSEUS



Leading research Institutes and SMEs from EU Member States, Associated States, Associated Candidate countries, non-EU Mediterranean and Black Sea countries, will join forces in a coordinated manner, in order to address common environmental pressures, and ultimately, take action in the challenge of achieving GES.

28. UNIVERSITEIT UTRECHT (NL)
29. UNIVERSITE DE LIEGE (BE)
30. UNIVERSITY OF THE AEGEAN-RESEARCH UNIT (EL)
31. NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS (EL)
32. PANEPISTIMIO KRITIS (UNIVERSITY OF CRETE) (EL)
33. THE CYPRUS RESEARCH AND EDUCATIONAL FOUNDATION (CY)
34. UNIVERSITY OF CYPRUS (CY)
35. NACIONALNI INSTITUT ZA BIOLOGIJO (SI)
36. INSTITUTE OF OCEANOGRAPHY AND FISHERIES (HR)
37. ISRAEL OCEANOGRAPHIC AND LIMNOLOGICAL RESEARCH LIMITED (IL)
38. UNIVERSITY OF HAIFA (IL)
39. BLACK SEA NGO NETWORK (BG)
40. SOFIISKI UNIVERSITET SVETI KLIMENT OHRIDSKI (BG)
41. INSTITUT PO BIORAZNOOBRAZIE I EKOSISTEMNI IZSLEDVANIYA BALGARSKA AKADEMIYA NA NAUKITE (BG)
42. INSTITUTE OF OCEANOLOGY. BULGARIAN ACADEMY OF SCIENCES (BG)
43. INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE MARINA GRIGORE ANTIPA (RO)
44. ISTANBUL UNIVERSITY (TR)
45. A. O. KOVALEVSKIY INSTITUTE OF BIOLOGY OF SOUTHERN SEAS (UA)
46. MARINE HYDROPHYSICAL INSTITUTE. UKRAINIAN NATIONAL ACADEMY OF SCIENCES (UA)
47. ODESSA NATIONAL I.I. MECHNIKOV UNIVERSITY (UA)
48. P.P. SHIRSHOV INSTITUTE OF OCEANOLOGY OF RUSSIAN ACADEMY OF SCIENCES (RU)
49. IVANE JAVAKHISHVILI TBILISI STATE UNIVERSITY (GE)
50. NATIONAL INSTITUTE OF OCEANOGRAPHY AND FISHERIES (EG)
51. INSTITUT NATIONAL DE RECHERCHE HALIEUTIQUE (MA)
52. CLU SRL (IT)
53. ECOLOGIC INSTITUT GEMEINNÜTZIGE GMBH (DE)
54. SAROST SA (TN)

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ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-5 The Ocean of Tomorrow

TROPOS



Modular Multi-use Deep Water Offshore Platform Harnessing and Servicing Mediterranean, Subtropical and Tropical Marine and Maritime Resources

The key objective of the TROPOS project is the development of a floating modular multi-use platform system for use in deep waters, with an initial geographic focus on the Mediterranean, Tropical and Sub-Tropical regions but designed to be flexible enough not to be limited in geographic scope.

The TROPOS approach is centered on the modular development where different types of modules can be combined as appropriate in each area. In this way, the TROPOS multi-use platform system is able to integrate a range of functions from the transport, energy, aquaculture and leisure sectors, in a greater number of geographical areas than if it was a set platform design. This subsequently provides greater opportunities for profitability.

The TROPOS design will focus on a floating multi-purpose structure able to operate in, and exploit, deep waters, where fixed structures such as those piled in the seabed are not feasible. The multi-use platforms developed from the concept designs will have the potential to provide European coastal regions with appropriate aquaculture systems, innovative transport services as well as leisure and offshore energy solutions.

The main S/T objectives of the project are:

- To determine, based on both numerical and physical modeling, the optimal locations for multi-use offshore platforms in Mediterranean, sub-tropical and tropical latitudes
- To research the relations between oceanic activities, including wind energy, aquaculture, transport solutions for shipping, and other additional services
- To develop novel, cost-efficient and modular multi-use platform designs, that enable optimal coupling of the various services and activities
- To study the logistical requirements of the novel multi-use platform
- To assess the economic feasibility and viability of the platform
- To develop a comprehensive environmental impact methodology and assessment
- To configure at least three complete solutions, for the Mediterranean, Sub-tropical and tropical areas.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

4,877,911.00

PROJECT N°

288192

DURATION

36 months

PROJECT START DATE

February 2012

LIST OF PARTNERS

1. CONSORCIO PARA EL DISEÑO, CONSTRUCCIÓN, EQUIPAMIENTO Y EXPLOTACION DE LA PLATAFORMA OCEANICA DE CANARIAS (ES)
2. THE UNIVERSITY OF EDINBURGH (UK)
3. UNIVERSITAET BREMEN (DE)
4. WAVE ENERGY CENTRE. CENTRO DE ENERGIA DAS ONDAS (PT)
5. UNIVERSIDAD POLITECNICA DE MADRID (ES)
6. FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V (DE)
7. TOULON VAR TECHNOLOGIES (FR)
8. NORSK INSTITUTT FOR VANNFORSKNING (NO)
9. DANMARKS TEKNISKE UNIVERSITET (DK)
10. INSTALACIONES INABENSA SA (ES)
11. PHYTOLUTIONS GMBH (DE)
12. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
13. NATIONAL SUN YAT-SEN UNIVERSITY (TW)
14. ADVANCE INTELLIGENT DEVELOPMENTS S.L. (ES)
15. BUREAU VERITAS-REGISTRE INTERNATIONAL DE CLASSIFICATION DE NAVIRES ET D AERONEFS SA (FR)
16. ECOLE CENTRALE DE NANTES. (FR)
17. ENEROCEAN S.L. (ES)
18. UNIVERSITY OF STRATHCLYDE (UK)

FP7-OCEAN-2011

TROPOS

Modular Multi-use Deep Water Offshore Platform
Harnessing and Servicing Mediterranean, Subtropical
and Tropical Marine and Maritime Resources

www.troposplatform.eu



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-5 The Ocean of Tomorrow

MERMAID



Innovative Multi-purpose off-shore platforms: planning, Design and operation

European oceans will be subject to massive development of marine infrastructure in the near future. The most obvious is the energy facilities e.g. offshore wind farms, exploitation of wave energy, expansion of electricity connections, and also further development and implementation of marine aquaculture. This will also lead to an increased need for marine infrastructure to support installation and the on-going operation of the facilities. However both economical costs and environmental impact have to be reduced in order to increase the feasibility of the use of ocean space.

Marine structures for offshore wind farms and aquaculture have to be installed at various sites and on much larger scale than earlier implementation of offshore structures in order to fulfil EU strategies (1) for reduction of fossil-based energy and (2) to become a major player in sustainable aquaculture. However the feasibility is much more sensitive to the costs of structures and the installation of the structures than for instance Oil & Gas facilities.

Novel innovative design concepts should address different physical conditions in order to make the best use of the ocean space. Going from deep water (north of Spain) to shallow water with high morphological activity (the Wadden sea) and further to inner waters like the inner Danish/Baltic areas and the Adriatic sea changes the focus from a strong physical aspect to environmental impact. This will make it possible to develop, test and integrate different technologies but also to address site specific challenges.

Both for offshore renewables and for aquaculture a substantial part of the costs is variable cost related to operations and maintenance of the plants. It is obvious that optimization of the use of ocean space for different purposes might benefit from shared resources such staff allocation, transportation of staff and material from and to the platforms, use of forecasting systems, ships etc.

FP7-OCEAN-2011

MERMAID



Innovative Multi-purpose off-shore platforms:
planning, Design and operation

www.mermaidproject.eu



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,483,411.00

PROJECT N°

288710

DURATION

48 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. DANMARKS TEKNISKE UNIVERSITET (DK)
2. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
3. UNIVERSIDAD DE CANTABRIA (ES)
4. STICHTING DELTARES (NL)
5. DHI (DK)
6. ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS. RESEARCH CENTER (EL)
7. VLAAMS INSTITUUT VOOR DE ZEE VZW (BE)
8. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
9. STATOIL PETROLEUM AS (NO)
10. ISTITUTO SUPERIORE PER LA PROTEZIONE E LA RICERCA AMBIENTALE (IT)
11. TECHNISCHE UNIVERSITAET BRAUNSCHWEIG (DE)
12. HAVFORSKNINGSINSTITUTTET (NO)
13. THE CYPRUS RESEARCH AND EDUCATIONAL FOUNDATION (CY)
14. HORTIMARE BV (NL)
15. UNIVERSITA DEGLI STUDI ROMA TRE (IT)
16. HVALPSUND NET AS (DK)
17. BOLDING & BURCHARD APS (DK)
18. INSTYTUT BUDOWNICTWA WODNEGO POLSKIEJ AKADEMII NAUK (PL)
19. ISTANBUL TEKNIK UNIVERSITESI (TR)
20. CHALMERS TEKNISKA HOEGSKOLA AB (SE)
21. MUSHOLM AS (DK)
22. DANSK AKVAKULTUR FORENING (DK)
23. UNIVERSITY OF DUNDEE (UK)
24. STICHTING ENERGIEONDERZOEK CENTRUM NEDERLAND (NL)
25. DONG ENERGY POWER AS* (DK)
26. ENEL INGEGNERIA E RICERCA SPA (IT)
27. KEFALONIA FISHERIES INDUSTRIAL AND COMMERCIAL COMPANY AE (EL)
28. NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS (EL)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION: FISHERIES and AQUACULTURE

KBBE-2-1-5 The Ocean of Tomorrow

H2OCEAN



Development of a wind-wave power open-sea platform equipped for hydrogen generation with support for multiple users of energy

The rational exploitation of oceans' space and resources is increasingly seen as crucial to enhance European competitiveness in key areas such as Renewable Energy and Aquaculture. The H2OCEAN consortium aims at developing an innovative design for an economically and environmentally sustainable multi-use open-sea platform. The H2OCEAN platform will harvest wind and wave power, using part of the energy on-site for multiple applications – including a multi-trophic aquaculture farm, and convert on-site the excess energy into hydrogen that can be stored and shipped to shore as green energy carrier. The project builds on already on-going R&D and commercial activities of a partnership involving European leading industrial and academic partners from 5 countries within the fields of renewable energy, fish farming, hydrogen generation, radar systems, maritime transports and related research disciplines. The unique feature of the H2OCEAN concept, besides the integration of different activities into a shared multi-use platform, lies in the novel approach for the transmission of offshore-generated renewable electrical energy through hydrogen. This concept allows effective transport and storage the energy decoupling energy production and consumption, thus avoiding the grid imbalance problem inherent to current offshore renewable energy systems. Additionally, this concept also circumvents the need for a cable transmission system which takes up a significant investment share for offshore energy generation infrastructures, increasing the price of energy. The envisaged integrated concept will permit to take advantage of several synergies between the activities within the platform significantly boosting the Environmental, Social and Economic potential impact of new maritime activities, increasing employment and strengthening European competitiveness in key economic areas.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

4,525,934.00

PROJECT N°

288145

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. METEOSIM TRUEWIND S.L. (ES)
2. VIRTUALPIE LTD (UK)
3. DEXA WAVE ENERGY APS (DK)
4. UNIVERSIDAD DE VALLADOLID (ES)
5. FRAUNHOFER-GESELLSCHAFT ZUR FÖRDERUNG DER ANGEWANDTEN FORSCHUNG E.V. (DE)
6. CHLAMYS S.R.L. (IT)
7. VIKING FISH FARMS LIMITED (UK)
8. INSTITUT FUER SEEVERKEHRSWIRTSCHAFT UND LOGISTIK (DE)
9. DANMARKS TEKNISKE UNIVERSITET (DK)
10. SETA SOCIEDAD ESPANOLA DE TRATAMIENTO DE AGUA SL (ES)
11. FUSION MARINE LIMITED (UK)
12. TREETLOGIC TELEMATICA Y LOGICA RACIONAL PARA LA EMPRESA EUROPEA SL (ES)
13. D'APPOLONIA SPA (IT)
14. UNIVERSIDAD DE OVIEDO (ES)
15. IT POWER LTD (UK)
16. CRANFIELD UNIVERSITY (UK)
17. SUSTAINABLE TECHNOLOGIES SL (ES)

FP7-OCEAN-2011

H2OCEAN



Development of a wind-wave power open-sea platform equipped for hydrogen generation with support for multiple users of energy

www.h2ocean-project.eu





ACTIVITY 2.2 FOOD, HEALTH and WELL-BEING



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-1 Consumers

CLYMBOL



Role of health-related claims and symbols in consumer behaviour

Health-related symbols and claims may be potentially influential in supporting informed choice, furthering healthier consumer food choices, and strengthening competitiveness of the European food industry in bringing about food products that support a healthier lifestyle. However, current insights into how health symbols and claims are understood and used in real-world shopping situations are limited, making it difficult to derive recommendations on the wording and design of health claims and symbols, including the context in which these appear on the food label. The objectives of this project are to determine how health-related symbols and claims, in their context, are understood by consumers, and how they affect purchasing and consumption, taking into account both individual differences in needs and wants and country-specific differences with regard to use of health claims and symbols. Guidelines will be developed for EU policy directed towards health-related symbols and claims, and a set of methods will be developed that can be used by policy-makers and industry to assess the effects of health claims and symbols as these appear on the market. The project will draw heavily on the involvement of stakeholders from the whole food sector to ensure results with high practical relevance.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,103.00

PROJECT N°

311963

DURATION

48 months

PROJECT START DATE

September 2012

LIST OF PARTNERS

1. EUROPEAN FOOD INFORMATION COUNCIL AISBL (BE)
2. AARHUS UNIVERSITET (DK)
3. UNIVERSITY OF SURREY (UK)
4. WAGENINGEN UNIVERSITEIT (NL)
5. THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD (UK)
6. UNIVERSITAET DES SAARLANDES (DE)
7. UNIVERSITEIT GENT (BE)
8. KØBENHAVNS UNIVERSITET (DK)
9. BUDAPESTI CORVINUS EGYETEM (HU)
10. SCHUTTELAAR & PARTNERS, ADVIESBUREAU VOOR MAATSCHAPPELIJKE COMMUNICATIE BV (NL)
11. LIVSMEDELS VERKET (SE)
12. UNIVERZA V LJUBLJANI (SI)
13. CENTRO DE INVESTIGACION Y TECNOLOGIA AGROALIMENTARIA DE ARAGON (ES)
14. GLOBUS SB-WARENHAUS HOLDING GMBH & CO. KG (DE)

KBBE-2012-2-1-01

CLYMBOL



Role of health-related symbols and claims in consumer behaviour

Website not available yet



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-1 Consumers

CONNECT4ACTION



Strategies for improving communication between social and consumer scientists, food technology developers and consumers

The objective of the CONNECT4ACTION project is to improve communication between consumers, consumer scientists, food technology developers, and other key players in the food technology development and commercialisation process. Focusing on communication and knowledge exchange between food technologists and consumer scientists, the results of the CONNECT4ACTION project will contribute to improvement of the multidisciplinary dialogue and increase consumer acceptance of new food products, thereby lowering the failure rate of new (food) technologies in Europe. A large group of stakeholders (food scientists and technologists from companies, universities and research institutes, together with consumer scientists, ethical experts, representatives of science media/journalists and consumers) will be connected with the project and each other via the online CONNECT4ACTION community. This online community strengthens the project with input and feedback during various stages and serves as a showcase of improved communication. Based on effective communication strategies identified in the relevant publications and, subsequently, opinions of experts based on their daily practices and experiences, this project will deliver an improved communication framework, accompanied by tools and training materials that enable food technology developers and other key players to improve step-by-step their food technology development processes. This experienced FP7 consortium, consisting of a broad, multidisciplinary network of key players who are involved in food technology development and commercialisation, has the expertise and experience from the field to disseminate and successfully implement innovative communication strategies into activities of daily life. Dissemination of project outcomes receives great attention, even after the project is finished. Finally, the networking effort of CONNECT4ACTION will result in a strengthened European cooperation between public and private stakeholders.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

994,211.00

PROJECT N°

289023

DURATION

36 months

PROJECT START DATE

December 2011

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. WAGENINGEN UNIVERSITEIT (NL)
3. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
4. ALMA MATER STUDIUM-UNIVERSITA DI BOLOGNA (IT)
5. AARHUS UNIVERSITET (DK)
6. EUROPEAN FOOD INFORMATION COUNCIL AISBL (BE)
7. EUROPEAN FEDERATION OF FOOD SCIENCE AND TECHNOLOGY (NL)
8. NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO (NL)
9. INTERNATIONALE GESELLSCHAFT FÜR GETREIDEWISSENSCHAFT UND -TECHNOLOGIE (AT)
10. UNIVERSITY OF NEWCASTLE UPON TYNE (UK)
11. Eidgenössisches Volkswirtschaftsdepartement (CH)

KBBE-2011-2-1-01

CONNECT4ACTION

Strategies for improving communication between social and consumer scientists, food technology developers and consumers

www.connect4action.eu



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-1 Consumers

EATWELL



Interventions to Promote Healthy Eating Habits: Evaluation and Recommendations

Obesity has been estimated to cost the EU some €70 billion annually through healthcare costs and lost productivity. The combined over-consumption of salt, sugar and saturated fats and under-consumption of fruit and vegetables causes almost 70 000 additional premature deaths annually in the UK alone.

The objectives of EATWELL project are to assess the efficacy of past initiatives to improve dietary and health outcomes, identify promising avenues for the future and assess the acceptability of potential future initiatives. The project will also produce best-practice guidelines and monitoring advice in relation to healthy eating. The results will be communicated to a wide audience.

EATWELL is expected to provide systematic benchmarking for diet and health-related policy initiatives within Member States, the EU and elsewhere. The research will generate new knowledge on the impact of initiatives on consumers' attitudes, knowledge, behaviour, diets and health in the short and long term. These results will be obtained through a review of initiatives using models of consumer behaviour from psychology and economics

The team will develop practical procedures for assessing cost-effectiveness, cost-utility and cost-benefit analysis of policy initiatives, which take into account market interactions and agents' adaptive behaviours. Recommendations will address the form, frequency and coverage of data that should be collected to enable an effective evaluation when new initiatives are launched, thereby contributing to a best-practice guide.

The results will show what lessons the public sector can learn from the experiences of the private sector in the promotion of healthy eating and develop a good-practice manual, including conditions of transferability. They will also give an overview of public, private and other stakeholder acceptance of alternative forms of intervention and how these vary by socio-demographics and by nation.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,511,852.00

PROJECT N°

226713

DURATION

48 months

PROJECT START DATE

April 2009

LIST OF PARTNERS

1. THE UNIVERSITY OF READING (UK)
2. AARHUS UNIVERSITET (DK)
3. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
4. UNIVERSITEIT GENT (BE)
5. ISTITUTO NAZIONALE DI RICERCA PER GLI ALIMENTI E LA NUTRIZIONE (IT)
6. THE JAGIELLONIAN UNIVERSITY MEDICAL COLLEGE (PL)
7. KRAFT FOODS R&D INC (US)
8. EUROPEAN FOOD INFORMATION COUNCIL AISBL (BE)
9. EUROPEAN ASSOCIATION OF COMMUNICATIONS AGENCIES SCRL (BE)
10. SCHOOL OF ORIENTAL AND AFRICAN STUDIES, UNIVERSITY OF LONDON (UK)

KBBE-2008-2-1-01

Measures aimed at promoting healthy eating habits

EATWELL

www.eatwellproject.eu


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-1 Consumers

FLABEL



Food Labelling to Advance Better Education for Life

Providing information to the consumer through use of nutrition labels is potentially a major method that will enable consumers to choose healthier foods. However, at present information concerning how nutrition labels are used by consumers in real-world shopping situations is limited. This makes the science-based formulation of new labelling policies and the evaluation of existing ones difficult.

This FLABEL project aims to determine how food nutrition labelling can affect dietary choices, consumer habits and food-related health issues. This will be done by developing and applying an interpretation framework incorporating information concerning the characteristics of the labels together with other factors and influences. Based on this, guidelines will be developed on the use of nutrition labelling.

The resulting guidelines will impact on EU policy and the food industry, especially SMEs, covering both on-going and future legislative and voluntary food labelling schemes. It may impact on EU legislation where Council Directive 2000/13/EC on labelling, presentation and advertising of foodstuffs to the final consumer is the main piece of EU legislation covering the labelling of foodstuffs.

This project will produce an EU-wide map of nutrition information available on food labels indicating to what extent nutrition labelling is currently available in all EU Member States as well as Turkey. It will also provide knowledge on how consumers actually become aware of and read food labels, assess which labels are most appealing and informative to the public and how to best strike a balance between 'simple' and 'complete' nutritional information. The need is to facilitate a free and informed choice where too little or simplistic information may not adequately serve the consumer while complex information may not be read or could cause confusion. Information will be provided on actual nutrition label use in the 'real world'.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,858,471.00

PROJECT N°

211905

DURATION

42 months

PROJECT START DATE

August 2008

LIST OF PARTNERS

1. EUROPEAN FOOD INFORMATION COUNCIL AISBL (BE)
2. AARHUS UNIVERSITET (DK)
3. UNIVERSITY OF SURREY (UK)
4. WAGENINGEN UNIVERSITEIT (NL)
5. AGRICULTURAL UNIVERSITY OF ATHENS (EL)
6. UNIVERSITAET DES SAARLANDES (DE)
7. EUROPEAN ASSOCIATION OF CRAFT SMALL AND MEDIUM SIZED ENTERPRISES (BE)
8. TESCO STORES LIMITED (UK)
9. CONFEDERATION DES ORGANISATIONS FAMILIALES DE L'UNION EUROPEENNE (BE)
10. COMMUNAUTE EUROPEENNE DES COOPERATIVES DE CONSOMMATEURS (BE)
11. UNIWERSYTET WARSZAWSKI (PL)
12. DOKUZ EYLUL UNIVERSITESI (TR)
13. GEORG-AUGUST-UNIVERSITAET GOETTINGEN STIFTUNG OEFFENTLICHEN RECHTS (DE)

KBBE-2007-2-1-03

Food labelling and consumer behaviour

FLABEL

www.flabel.org/en


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-1 Consumers

FOCUS-BALKANS



Food Consumer Science in the Balkans: Frameworks, Protocols and Networks for a better knowledge of food behaviours

The general objective of the project was to improve competencies and understanding of food consumer science in the Balkan countries. This resulted in both a greater participation of scientists from the Western Balkan Countries (WBC) in projects related to food consumer science and in an increased number of publications related to food consumer issues in the WBC.

The spirit of the project FOCUS-BALKANS encompassing six WBC [Bosnia-Herzegovina, Croatia, Macedonia, Montenegro, Serbia, Slovenia] was to interlink research, training and networking activities regarding food consumer science.

One of its objectives was to develop a network of universities, institutes, high schools, consumer organisations, NGOs and private enterprises active in food related consumer science. The aim was to increase knowledge and understanding of WBC food consumers, with a focus on foods and fruits products believed to have positive nutritional properties and to be more sustainable (organic and traditional food products).

Based on the collected qualitative and quantitative data on consumer attitudes and behaviour variations between food consumer groups and food markets have been identified. New methods and tools have been developed and adapted to the WBC.

Trainings and workshops to disseminate theoretical and methodological knowledge in the field of food consumer science have been conducted. It has resulted in effective relationships and exchanges between the WBC beneficiaries, methods and methodologies understanding and appropriation, specification of the scope of each research area, production of the different methodologies and good overview of how to organise a consumer survey.

For all the four studied markets (fruits, products with health's claims, organic products and traditional food), there is a need of future research on food consumption, food and health policies, and markets' trends. The recommendation is to develop the collection of reliable data on food consumption, so to increase the scientific-based knowledge in three main general directions.

- Research about consumers: food intake, food behaviour, consumers' beliefs, expectations, preferences, motives and attitudes.
- Research about the communication and the information policies and tools (efficiency, targeting, content, up-taking, etc.).
- Market research: structure, functioning, rules, organisations, standards, investments, etc.

KBBE-2007-2-1-02

Developing research tools for food consumer science
in the Western Balkan Countries

FOCUS-BALKANS

www.focus-balkans.org


PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,614,110.00

PROJECT N°

212579

DURATION

36 months

PROJECT START DATE

October 2008

LIST OF PARTNERS

1. EIDGENÖSSISCHE TECHNISCHE HOCHSCHULE ZÜRICH (CH)
2. SEEDEV DOO BEOGRAD (RS)
3. STRATEGIC MARKETING DOO (RS)
4. SOCIETE D'ETUDE POUR LE MARKETING, L'ENGINEERING ET LA GESTION (FR)
5. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
6. INSTITUT D ENSEIGNEMENT SUPERIEUR ET DE RECHERCHE EN ALIMENTATION SANTE ANIMALE SCIENCES AGRONOMIQUES ET DE L ENVIRONNEMENT VETAGRO SUP (FR)
7. EKONOMSKI FAKULTET, UNIVERZITET U BEOGRADU (RS)
8. SVEUCILISTE U ZAGREBU EKONOMSKI FAKULTET (HR)
9. REPUBLICKI ZAVOD ZA ZDRAVSTVENA ZASTITA (MK)
10. UNIVERZA V LJUBLJANI (SI)
11. UNIVERSITY OF NEWCASTLE UPON TYNE (UK)
12. UNIVERSITA DEGLI STUDI DI PARMA (IT)
13. ECOZEPT GBR (DE)
14. UNIVERZITET U BANJALUCI POLJOPRIVRE DNI FAKULTET (BA)
15. ZDRAVSTVENA USTANOVA INSTITUT ZA JAVNO ZDRAVLJE PODGORICA (ME)
16. DEVELOPPEMENT DE L'AGRICULTURE ET DE L'ESPACE RURAL : AGRIDEA (CH)
17. WAGENINGEN UNIVERSITEIT (NL)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-1 Consumers

FOODRISC



Food Risk Communication. Perceptions and communication of food risks/benefits across Europe: development of effective communication strategies.

FoodRisC will characterise key configurations of food risk/benefit relationships and the consequent implications for risk communicators, make recommendations about the unique potential of new social media (e.g. social networks and blogging) and provide a systematic understanding of how consumers deal with food risk/benefit information. The FoodRisC consortium is comprised of experts in key fields relevant to food risk/benefit communication from research institutes, consumer organisations and SMEs in ten Member States. This consortium is supported by an Advisory Board of representatives from seven organisations of world renown in food risk/benefit communication (including EFSA, WHO and Google). The project will identify the barriers to communicating to consumers across Europe and identify key socio-psychological and socio-demographic characteristics, including gender, that affect food risk/benefit perceptions and processes as well as consumer preferences for communication channels. These objectives will be achieved through a range of research approaches and methods and by extending the theoretical basis of how people acquire and use information in food domains. The impact of the project will be at a European level and will be facilitated through the development of the FoodRisC toolkit together with practical guidance to enable the effective communication of coherent messages across the Member States. Use of the toolkit and guides will assist policy makers, food authorities and other end users in developing common approaches to communicating coherent messages to consumers in Europe. The effective spread of food risk/benefit information will assist initiatives aimed at reducing the burden of food-related illness and disease, reducing the economic impact of food crises and ensuring that confidence in safe and nutritious food is fostered and maintained in Europe.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,973,855.00

PROJECT N°

245124

DURATION

41 months

PROJECT START DATE

June 2010

LIST OF PARTNERS

1. UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN (IE)
2. UNIVERSITY OF SURREY (UK)
3. UNIVERSITEIT TWENTE (NL)
4. PARTIKAS UN VETERINARA DIENESTA PARTIKAS CENTRS - FOOD CENTRE OF FOOD AND VETERINARY SERVICE FVS FC (LV)
5. UNIVERSITEIT GENT (BE)
6. CENTRO DE INVESTIGACAO E DE INTERVENCAO SOCIAL ASSOCIACAO (PT)
7. FOCUS BUSINESS COMMUNICATIONS LIMITED (UK)
8. EUROPEAN FOOD INFORMATION COUNCIL AISBL (BE)
9. WHITE OCTOBER LIMITED (UK)
10. BROOK LYNDHURST (UK)
11. FREIE UNIVERSITAET BERLIN (DE)
12. HYLOBATES CONSULTING S.R.L. (IT)
13. UNIVERSITAT ROVIRA I VIRGILI (ES)
14. BRUNEL UNIVERSITY (UK)

KBBE-2009-2-1-02

FOODRISC

Benefit/risk perception and communication in the food chain

www.foodrisc.org


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-1 Consumers

HABEAT



Determining factors and critical periods in food habit formation and breaking in early childhood: a multidisciplinary approach

The food behaviour and preferences are more likely determined at the end of early childhood during the period of first sensory experiences of the child, by discovering the tastes and textures of different food. Therefore it seems important that the child has already tasted a variety of food before the age of 2-3 years, when he/she can become difficult by refusing to eat new food. HabEat has brought together from 6 European countries with a multidisciplinary approach to enable a key breakthrough in the understanding of how food habits are formed (and can also be changed) in infants and young children.

This will be done by combining epidemiologic studies based on existing human cohorts from four countries and experimental work carried out in six countries so as to collaboratively identify:

- the critical periods in the formation/breaking of food habits;
- the key learning mechanisms, their relative impact in the short, mid and long term, and their importance according to the different critical periods;
- the most effective strategies for breaking habits, i.e. for changing from poor to healthy habits;
- individual reactions to the learning mechanisms and individual susceptibility to changes.

This research will help to increase understanding of the critical ages and periods when food habits and eating patterns form in infants and children, and to support effective intervention strategies for habit-breaking and behavioural change directed towards healthier food choices.

HabEat will work hand-in-hand with a board of stakeholder advisors (including industry, health professionals) to produce guidelines on the recommendations that should be communicated to childcare professionals and parents from different target groups (especially those most at risk) in the EU. By 2013, the results from the HabEat project should lead to recommendations in parental practices for feeding infants and children. These recommendations will be addressed to early childhood professionals, paediatricians, and political decision-makers in charge of defining nutritional policies, as well as to the baby food industry.

KBBE-2009-2-1-01

Determinants of food habit formation/breaking

HABEAT

www.habeat.eu


PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,998,799.00

PROJECT N°

245012

DURATION

48 months

PROJECT START DATE

January 2010

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
3. INSTITUT NATIONAL DE LA SANTE ET DE LA RECHERCHE MEDICALE (INSERM) (FR)
4. UNIVERSITY OF LEEDS (UK)
5. WAGENINGEN UNIVERSITEIT (NL)
6. KØBENHAVNS UNIVERSITET (DK)
7. UNIVERSITY COLLEGE LONDON (UK)
8. UNIVERSIDADE DO PORTO (PT)
9. HAROKOPIO UNIVERSITY (EL)
10. UNIVERSITY OF BRISTOL (UK)
11. INRA TRANSFERT S.A. (FR)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-1 Consumers

I.FAMILY



Determinants of eating behaviour in European children, adolescents and their parents

Nutrition-related diseases caused a loss of over 56 million years of healthy life of European citizens in 2000. I.Family will make a significant contribution to reduce this burden by studying the interplay and impact of the main drivers of dietary behaviour and food choice. It will take advantage of the unique opportunity to follow-up the large IDEFICS children's cohort to not only provide added value by maintaining the existing cohort but also, exceptionally, assess the dynamic nature of causal factors over time and during transition into adolescence. The project's acronym indicates its focus on the individual and its family. By re-assessing children and their parents I.Family will compare families who developed or maintained a healthy diet with those whose diet developed in an unfavourable direction to study the impact of biological, behavioural, social and environmental factors on dietary behaviour over time. Focus will be on the family environment, socio-behavioural and genetic factors determining familial aggregation. Subgroups with contrasting dietary profiles will undergo an enhanced protocol including measurement of brain activation, expression of genes related to food choice, biological and genetic basis for taste thresholds, role of sleep, sedentary time, physical activity and impact of the built environment. I.Family will also link health outcomes like body composition and cardio-metabolic markers to diet and interacting factors to determine their prognostic value. Thus I.Family provides strength of methodology, breadth of coverage and depth of investigation across the ecological model. Guided by research on ethical implications I.Family will be deriving effective communication strategies to empower European consumers to induce behaviour changes, supported by novel web-based, interactive personalised feedback on dietary behaviour. By building on existing success I.Family will take the research on dietary behaviour to the next level in a short time frame.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

9,000,000.00

PROJECT N°

266044

DURATION

60 months

PROJECT START DATE

March 2012

LIST OF PARTNERS

1. UNIVERSITAET BREMEN (DE)
2. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
3. COPENHAGEN BUSINESS SCHOOL (DK)
4. LANCASTER UNIVERSITY (UK)
5. GOETEBORGS UNIVERSITET (SE)
6. HELSINGIN YLIOPISTO (FI)
7. UNIVERSITAT DE LES ILLES BALEARS (ES)
8. PECSI TUDOMANYEGYETEM - UNIVERSITY OF PECS (HU)
9. UNIVERSITAIR MEDISCH CENTRUM UTRECHT (NL)
10. EREVNITIKO KAI EKPAIDEFTIKO INSTITOUTO IGIA TOU PAIDIOU LBG (CY)
11. TERVISE ARENGU INSTITUUT (EE)
12. FONDAZIONE IRCCS ISTITUTO NAZIONALE DEI TUMORI (IT)
13. UNIVERSITY OF BRISTOL (UK)
14. MINERVA PUBLIC RELATIONS & COMMUNICATIONS LIMITED (UK)
15. BIPS - INSTITUT FÜR EPIDEMIOLOGIE UND PRÄVENTIONSFORSCHUNG GMBH (DE)
16. UNIVERSITEIT GENT (BE)
17. UNIVERSIDAD DE ZARAGOZA (ES)

KBBE-2010-2-1-01

Determinants of food choice and eating habits

I.FAMILY

www.ifamilystudy.eu


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-1 Consumers

MAITRE



Media Actions for International Training of REsearchers

The interaction between science and the media is a key element in the public opinion's understanding of research issues and of citizens' consensus on public spending for research. Food re-search issues have been recently at the heart of heated debates and often subject to misrepresentations partially due to over-simplification by the media or to insufficient involvement of scientists in communication to the large public. This is a bottleneck that still hinders citizens' comprehension of major scientific themes currently discussed at European or national level. The MAITRE project intends to act on researchers' readiness to manage communication processes oriented to the large public. The rationale is to transfer from the journalists to the researchers parts of the translation process that is needed to bring scientific information from the laboratories to the common people. If scientists gain a full understanding of the information production processes in today's media (newspapers, tv, web, etc.), they will be able to handle their input in communication in a more effective way, combining soundness of scientific information with the necessary level of clarity adapted to the needs of the general public. The project will revolve around a cycle of training sessions to be delivered by journalists and media experts to a target group of roughly 600 re-searchers from organisations involved in KBBE funded projects. Trainings will be organised in several countries and in different languages, paying attention to ensure a wide coverage of the EU, including countries of the enlarged Europe and of different sub-themes addressed by the KBBE programme. The project has potential to considerably step up researchers' capacity to explain the scope and results of their activities, thus contributing to bring science closer to the citizens and these to a better understanding of why the integration of European research resources is beneficial to the whole European society.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

908,251.00

PROJECT N°

265873

DURATION

36 months

PROJECT START DATE

April 2011

LIST OF PARTNERS

1. MINERVA CONSULTING & COMMUNICATION (BE)
2. STICHTING EUROPEAN JOURNALISM CENTRE (NL)
3. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
4. EUROPEAN ASSOCIATION FOR FOOD SAFETY AISBL (BE)

KBBE-2010-2-1-02

Media training for food and nutrition scientists

MAITRE

www.maitreproject.eu


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-1 Consumers

TOY BOX



Multifactorial evidence based approach using behavioural models in understanding and promoting fun, healthy food, play and policy for the prevention of obesity in early childhood: ToyBox

The ToyBox project addresses the behavioural model for prevention of obesity, with a particular focus on children. It will primarily aim to influence children's behaviours and prevent obesity in early childhood. The project will identify key behaviours related to early childhood obesity and their determinants, and evaluate behavioural models and educational strategies. These key behaviours are:

- identifying young children's key behaviours and their determinants related to early childhood obesity; evaluating existing behavioural models and educational strategies that best support behavioural change in this age group; assessing environments, policies and legislation affecting the implementation of kindergarten-based health promotion activities;
- developing a kindergarten-based, family-involved intervention to influence obesity-related behaviours in four to six year olds, adjusting for cultural, legislative and infrastructural diversities in the participating countries;
- implementing the intervention program in six European countries, assessing its process, impact and outcomes and estimating its cost-effectiveness;
- disseminating the results and making recommendations for European public health policy.

Early childhood is a critical period for addressing obesity prevention since behaviours, psychological traits and physiological processes are largely developed or formed at this young age. The development and adoption of the desired behaviours will help to ensure optimum growth during childhood and increase the likelihood of long-term health in adulthood.

The combined use of Precede-Proceed Model and Intervention Mapping will provide the framework for the development, implementation and evaluation of the ToyBox intervention.

Within ToyBox-study, a multi-component kindergarten-based and family-involved intervention will be developed, aiming to facilitate the local needs within a European scale approach. This intervention will be applied in a selected number of European countries and a comprehensive (process, impact, outcome and cost effectiveness) evaluation will be performed. The results of ToyBox-study will be disseminated among key stakeholders, including scientists, policy makers and the general population.

KBBE-2009-2-1-03

Behavioural models for prevention of obesity,
with a particular focus on children

TOY BOX

www.toybox-study.eu


PROJECT COORDINATOR

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- HAROKOPIO UNIVERSITY (EL)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,989,255.00

PROJECT N°

245200

DURATION

42 months

PROJECT START DATE

March 2010

LIST OF PARTNERS

1. HAROKOPIO UNIVERSITY (EL)
2. LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN (DE)
3. UNIVERSITEIT GENT (BE)
4. VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG (NL)
5. UNIVERSIDAD DE ZARAGOZA (ES)
6. AKERSHUS UNIVERSITY COLLEGE (NO)
7. UNIVERSITY OF DURHAM (UK)
8. STAATSINSTITUUT FUR FRUHPADAGOGIK (DE)
9. INSTYTUT POMNIK CENTRUM ZDROWIA DZIECKA (PL)
10. MEDICAL UNIVERSITY OF VARNA (BG)
11. THE INTERNATIONAL ASSOCIATION FOR THE STUDY OF OBESITY (UK)
12. NATIONAAL INSTITUUT VOOR GEZONDHEIDSBEVORDERING EN ZIEKTEPREVENTIE (NL)
13. AOK-VERLAG GMBH (DE)
14. ROEHAMPTON UNIVERSITY (UK)
15. UNIVERSITE DU LUXEMBOURG (LU)
16. HIOA - HOGSKOLEN I OSLO OG AKERSHUS (NO)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

ATHENA



AnThocyanin and polyphenol bioactives for Health Enhancement through Nutritional Advancement

Anthocyanins are health promoting dietary polyphenols that protect against cardiovascular disease, cancer and obesity in preclinical studies with animals.

The overall objective of the ATHENA project is to provide a robust scientific foundation for improved dietary recommendations that include foods with high levels of anthocyanins and related polyphenols to promote health and to protect against chronic disease.

Specific objectives are to find answers to the following questions:

Benefits and risks: What is the dose response to anthocyanin phytonutrients?

Are anthocyanins from different food sources equivalent? How well do anthocyanins perform in promoting health compared to other polyphenol phytonutrients such as stilbenes, isoflavones and epicatechins?

Mechanisms of action: What are the mechanisms of action of polyphenol phytonutrients in combating chronic diseases? How do anthocyanins limit weight gain/fat development? How do dietary anthocyanins offer cardioprotection? How do dietary anthocyanins slow the progression of cancers or reduce the side effects of cancer therapy?

Food or Pharma: Supplements or extracts of polyphenols do not appear to promote health as well as when they are consumed in whole foods. What is the influence of the nutritional context on the efficacy of polyphenol phytonutrients? Does nutritional context influence the bioavailability of polyphenol phytonutrients?

Roles in human: Do dietary anthocyanins afford protection against cardiovascular disease, cancer and other chronic diseases in human?

ATHENA will bring together groups with widely different expertise from across Europe, so that the consortium will be able to achieve significant progress towards addressing the Grand Challenge of Chronic Disease. It will impact the health, well-being and quality of life across Europe.

PROJECT COORDINATOR

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- JOHN INNES CENTRE (UK)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,996,226.00

PROJECT N°

245121

DURATION

48 months

PROJECT START DATE

July 2010

LIST OF PARTNERS

1. JOHN INNES CENTRE (UK)
2. UNIVERSITA DEGLI STUDI DI MILANO (IT)
3. LEIBNIZ - INSTITUT FUER PFLANZENGENETIK UND KULTURPFLANZENFORSCHUNG (DE)
4. UNIVERSITA CATTOLICA DEL SACRO CUORE (IT)
5. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
6. UNIVERSITE JOSEPH FOURIER GRENOBLE 1 (FR)
7. ISTANBUL TEKNIK UNIVERSITESI (TR)
8. ISTITUTO EUROPEO DI ONCOLOGIA SRL (IT)
9. CONSIGLIO PER LA RICERCA E SPERIMENTAZIONE IN AGRICOLTURA (IT)
10. INSTITUTE OF FOOD RESEARCH (UK)
11. KOS GENETIC S.R.L. (IT)

KBBE-2009-2-2-02

ATHENA



Role and mechanisms of action of plant bioactive compounds

www.athena-flora.eu/



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

BACCHUS



Beneficial effects of dietary bioactive peptides and polyphenols on cardiovascular health in humans

The main objective of the BACCHUS project is to develop tools and resources that will facilitate the generation of robust and exploitable scientific evidence that can be used to support claims of a cause and effect relationship between consumption of bioactive peptides and polyphenols, and beneficial physiological effects related to cardiovascular health in humans. To achieve this, the BACCHUS consortium has assembled 12 leading Research & Technological centres and 16 SMEs (with ca 30% of the EC requested contribution allocated to the SMEs). BACCHUS thus contains SMEs directly involved in developing food products and pursuing health claims, experts in health claims legislation and the EFSA review process, and academic and industry partners who provide high quality food and health research that can underpin health claims. Existing SME-developed products that have clear potential for obtaining favourable opinions for health claims have been selected as test cases for study. These have been aligned with a series of work-packages each of which addresses key aspects of the EFSA health claim evaluation process (legislation and dossiers; product/bioactive characterisation; habitual intakes; bioavailability; mechanisms and biomarkers; clinical trials evidence of health benefit) that will deliver tools, processes and high quality original science. Scientific results and best practice guidelines will be made publically available and thus support future claims for industry. The scope and completeness of the existing bioactive database (eBASIS) that includes both compositional and biological effects data will be extended and developed as a sustainable tool with various training materials. All outcomes will be disseminated broadly by direct engagement with SMEs via an existing European SME association, with stakeholders via seminars, newsletters and press releases, as well as through traditional scientific routes (high quality publications, and conference presentations).

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,554.00

PROJECT N°

312090

DURATION

48 months

PROJECT START DATE

October 2012

LIST OF PARTNERS

1. INSTITUTE OF FOOD RESEARCH (UK)
2. UNIVERSITY OF LEEDS (UK)
3. TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU (TR)
4. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
5. NOFIMA AS (NO)
6. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
7. INSTITUT ZA MEDICINSKA ISTRA IVANJA (RS)
8. ALMA MATER STUDIOURUM-UNIVERSITA DI BOLOGNA (IT)
9. UNIVERSITEIT GENT (BE)
10. VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. (BE)
11. LGC LIMITED (UK)
12. HELSINGIN YLIOPISTO (FI)
13. BRITISH NUTRITION FOUNDATION (UK)
14. EUROPEAN FOOD INFORMATION RESSOURCE AISBL (BE)
15. PAMIDA INTERNATIONAL SRO (SK)
16. CREME SOFTWARE LTD (IE)
17. VALDYCOMER SA (ES)
18. INDUSTRIAS CARNICAS VAQUERO (ES)
19. WAGRALIM ASBL (BE)
20. CRITICAL PROCESSES LTD (UK)
21. CORESENCE LIMITED (UK)
22. LABORATORIOS ADMIRA SL (ES)
23. BIOAESIS SRL (IT)
24. KAMUT ENTERPRISES OF EUROPE BVBA (BE)
25. BIOACTOR BV (NL)
26. PRODIGEST (BE)
27. NUTRIKA DOO (RS)
28. FUNDACION UNIVERSITARIA SAN ANTONIO DE CARTAGENA (ES)

KBBE-2012-2-2-01

Beneficial effects of bioactive compounds in humans

BACCHUS

Website not available yet



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

BASEFOOD



Sustainable exploitation of bioactive components from the Black Sea Area traditional foods

BaSeFood aims to promote sustainable development and exploitation of traditional foods, and related emerging bioactive compounds with putative health effects in the Black Sea Region.

The project is intended to help establish a rationale for integrating the concepts of health-promoting foods and traditional foods. This will create a knowledge base for a sustainable economic development in the production and processing of tradition-based healthy foods. Specifically, the BaSeFood project will produce reports on selected traditional foods, which may contribute to proprietary claims at a national or European level, or health and nutritional claims.

The team will produce analytical data on the overall nutritional and characteristic bioactive content of selected foods, and compare it with the results available in food composition databases, with special reference to EuroFIR-BASIS. The project will also cover the attitude of various categories of consumers towards Black Sea area traditional foods and will involve a range of stakeholders, particularly SMEs and local interest groups.

The project will contribute to the knowledge on the effect bioactive compounds on human health. The food list from integrated records and on site explorations, will be a meaningful record of traditional foods in the area, also in a perspective of intercultural comparison, and may be useful in a number of contexts, included the identification and valorisation of plant and food diversity.

Overall, the project will make a contribution to the substantiation of nutrition/health claims relating to traditional foods, promote sustainable economic development for European SMEs and the Black Sea region, and enhance cooperation between researchers and stakeholders.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,906,233.00

PROJECT N°

227118

DURATION

36 months

PROJECT START DATE

April 2009

LIST OF PARTNERS

1. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
2. INSTITUTE OF FOOD RESEARCH (UK)
3. HELLENIC HEALTH FOUNDATION (EL)
4. INSTITUTO NACIONAL DE SAUDE DR. RICARDO JORGE (PT)
5. ODESSA NATIONAL ACADEMY OF FOOD TECHNOLOGIES (UA)
6. UZHGORODSKYI NACIONALNYI UNIVERSITET (UA)
7. STATE EDUCATIONAL INSTITUTION OF THE HIGHER PROFESSIONAL EDUCATION MOSCOW STATE UNIVERSITY OF FOOD PRODUCTIONS (RU)
8. SPREAD EUROPEAN SAFETY GEIE (IT)
9. ACADEMIA DE STUDII ECONOMICE DIN BUCURESTI (RO)
10. BIOLOGICAL FARMING ASSOCIATION ELKANA (GE)
11. INSTITUT ZA MEDICINSKA ISTRA IVANJA (RS)
12. UNIVERSITY OF FOOD TECHNOLOGIES (BG)
13. YEDITEPE UNIVERSITY (TR)

KBBE-2008-2-2-02

Bioactive compounds in traditional food products - SICA (Black Sea Region)

BASEFOOD

www.basefood-fp7.eu


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

BIOCLAIMS



BIOmarkers of Robustness of Metabolic Homeostasis for Nutrigenomics-derived Health CLAIMS Made on Food

The food and health relationship focuses on maintenance of optimal health, both in terms of physiology and new European legislation. Yet, most accepted biomarkers quantify (intermediate) disease endpoints or damage. This has led to major problems in demonstrating health benefits and establishing health claims, and blocks competitive economic and health developments in the food sector.

BIOCLAIMS develops new biomarkers by exploiting the new concept of health biomarkers through quantification of the robustness of the homeostatic mechanisms involved in maintaining optimal health, based on the assumption that the ability to maintain homeostasis in a continuously challenged environment and changing physiology is key for healthy ageing. Mechanisms involved will be investigated during a series of food interventions in animal models and humans using predisposed conditions. Human models of presumed impaired robustness in maintaining metabolic and vascular health will be employed to study the responses of established and novel biomarkers to the challenging of homeostasis and to selected food interventions. Both advanced analytical methodology including nutrigenomics tools (transcriptomics, metabolomics, fatty acid composition, adipokine profile, macromolecule damage) and whole body physiological assessments will be exploited to derive a series of new biomarkers. Gender differences will be addressed.

BIOCLAIMS delivers a series of robust biomarkers predictive of a healthy metabolic phenotype during ageing, based on stressors of homeostasis. These biomarkers will be fully characterized and evaluated for practical application in human nutrition, and compared to traditional ones.

BIOCLAIMS will provide scientific evidence to help support the development of health claims on food. This has important societal and economic implications, as the interest in health promoting foods is huge and increasing in developed societies.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,211.00

PROJECT N°

244995

DURATION

60 months

PROJECT START DATE

March 2010

LIST OF PARTNERS

1. UNIVERSITAT DE LES ILLES BALEARS (ES)
2. WAGENINGEN UNIVERSITEIT (NL)
3. CENTRE TECNOLÒGIC EN TECNOLOGIES DE LA NUTRICIO I LA SALUT (ES)
4. FYZIOLOGICKY USTAV AKADEMIE VED CESKE REPUBLIKY VEREJNA VYZKUMNA INSTITUTE (VVI) (CZ)
5. DEUTSCHES INSTITUT FUER ERNAEHRUNGSFORSCHUNG POTSDAM REHBRUCKE (DE)
6. THE JAGIELLONIAN UNIVERSITY MEDICAL COLLEGE (PL)
7. UNIVERSITAET GRAZ (AT)
8. THE UNIVERSITY OF WARWICK (UK)
9. UNIVERSITY OF SOUTHAMPTON (UK)
10. MEDIZINISCHE UNIVERSITAET GRAZ (AT)
11. NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO (NL)

KBBE-2009-2-2-03

BIOCLAIMS



Development of biomarkers for health-promoting functions

<http://bioclaims.uib.es/>



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

EARLYNUTRITION



Long-term effects of early nutrition on later health

Nutrition during early development has an important impact on later health, particularly through greater obesity risks, as demonstrated by FP6 EARNEST. EarlyNutrition explores the current key hypotheses on likely causes and pathways to prevention of early life origins of obesity (specifically adiposity) and associated disorders. We bring extraordinary expertise and study populations of 470,000 individuals to investigate:

- The fuel mediated in utero hypothesis
- The accelerated postnatal weight gain hypothesis
- The mismatch hypothesis.

Scientific and technical expertise in placental biology, epigenetics and metabolomics will provide understanding at the cellular and molecular level, and refined strategies for intervention in pregnancy and early postnatal life to prevent obesity. Using existing cohort studies, ongoing and novel intervention studies and a basic science programme, we will provide the scientific foundations for evidence-based recommendations for optimal EarlyNutrition that incorporate long-term health outcomes, focusing on 4 Target Groups: women before pregnancy; pregnant women; infants (incl. breastfeeding); young children. Evidence is produced from animal and placental studies (Theme 1; T1), prospective cohort studies (T2), and randomised controlled trials in pregnant women and infants (T3). T4 covers scientific strategic integration, recommendation development and dissemination, including systematic reviews and behaviour change approaches. A strong multi-disciplinary team of international leaders in the field including collaborators from USA and Australasia achieves balance and complementarity.

The project's impact comprises definitive evidence on EarlyNutrition effects on health, enhanced EU and global policies, major economic benefits through obesity prevention and value-added nutritional products, and practical recommendations on optimal nutrition in Target Groups. Wide dissemination will be achieved through active engagement with stakeholders.

KBBE-2011-2-2-03

Long-term influence of early nutrition on health

EARLYNUTRITION

www.project-earlynutrition.eu


PROJECT COORDINATOR

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FUNDING SCHEME CP

EC CONTRIBUTION € 8,962,771.00

PROJECT N° 289346

DURATION 60 months

PROJECT START DATE February 2012

LIST OF PARTNERS

1. LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN (DE)
2. KING'S COLLEGE LONDON (UK)
3. MEDIZINISCHE UNIVERSITAET GRAZ (AT)
4. STATENS SERUM INSTITUT (DK)
5. UNIVERSIDAD DE MURCIA (ES)
6. THE UNIVERSITY OF NOTTINGHAM (UK)
7. NASJONALT FOLKEHELSEINSTITUTT (NO)
8. UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN (IE)
9. VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG (NL)
10. UNIVERSITAT ROVIRA I VIRGILI (ES)
11. ACADEMISCH ZIEKENHUIS LEIDEN - LEIDS UNIVERSITAIR MEDISCH CENTRUM (NL)
12. UNIVERSITY OF SOUTHAMPTON (UK)
13. ERASMUS UNIVERSITAIR MEDISCH CENTRUM ROTTERDAM (NL)
14. UNIVERSIDAD DE GRANADA (ES)
15. KOBENHAVNS UNIVERSITET (DK)
16. WARSZAWSKI UNIWERSYTET MEDYCZNY (PL)
17. THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE (UK)
18. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
19. UNIVERSITA DEGLI STUDI DI MILANO (IT)
20. INSTYTUT POMNIK CENTRUM ZDROWIA DZIECKA (PL)
21. NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS (EL)
22. UNIVERSITE LIBRE DE BRUXELLES (BE)
23. MEDSCINET UK LTD (UK)
24. SERVICEXS BV (NL)
25. BIOLUTION GMBH (AT)
26. NIZO FOOD RESEARCH BV (NL)
27. DANONE RESEARCH BV (NL)
28. BENE0 GMBH (DE)
29. ABBOTT LABORATORIES SA (ES)
30. THE REGENTS OF THE UNIVERSITY OF CALIFORNIA (US)
31. HARVARD PILGRIM HEALTH CARE INC CORP (US)
32. THE UNIVERSITY OF TEXAS SYSTEM (US)
33. CASE WESTERN RESERVE UNIVERSITY CORPORATION - CWRU (US)
34. TELETHON INSTITUTE FOR CHILD HEALTH RESEARCH (AU)
35. MURDOCH CHILDRENS RESEARCH INSTITUTE (AU)
36. THE UNIVERSITY OF ADELAIDE (AU)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

EFRAIM



Mechanisms of early protective exposures on allergy development

Allergies have developed into a major health concern in Europe, and while allergic diseases can be managed effectively, they cannot be cured. The onset of allergies starts early in life and there is increasing evidence that exogenous factors affecting the incidence of these illnesses are having an impact early in life, and sometimes even prenatally.

The highly interdisciplinary EFRAIM project is investigating the main protective factors in early life influencing the development of allergies in birth cohorts, conducted in allergy-protected environments in five European countries. These birth cohorts have enrolled over 1 000 children and have collected detailed information on the onset of allergic illnesses, objective measures of allergies concerned and a vast amount of information quantifying environmental exposures.

The project investigates two routes of preventive interventions in animal models and in vitro studies: the development of an allergy-safe milk formula and the development of an allergy vaccine. Both approaches are based on knowledge gained in the human studies.

Many PASTURE samples, collected from children before age six, have not been analysed previously. The EFRAIM project provides financial resources for the continuation of this work. Early life factors in particular are addressed, such as putatively protective factors in breast milk and serum markers of the antioxidant vitamins E and D. Serum levels of $\omega 3$ - and $\omega 6$ - polyunsaturated fatty acids and their ratio are determined and will be related to allergic outcomes. Mucosal barrier function is measured by different direct and indirect markers. Relevant qualitative and quantitative microbial exposure are assessed by fingerprinting faecies, cow's milk and house dust samples collected in the first years of life. Epigenetic phenomena are analysed in blood samples taken at various times.

The EFRAIM project is expected to produce ground-breaking new insights into protective agents and their mechanisms that can be used to prevent the further development of allergies.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,988,000.00

PROJECT N°

211911

DURATION

48 months

PROJECT START DATE

February 2008

LIST OF PARTNERS

1. LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN (DE)
2. KARDINAL SCHWARZENBERG'SCHES KRANKENHAUS BETRIEBSGESSELLSCHAFT MBH (AT)
3. PHILIPPS UNIVERSITAET MARBURG (DE)
4. UNIVERSITAET ZUERICH (CH)
5. UNIVERSITAET ULM (DE)
6. UNIVERSITE DE FRANCHE-COMTE (FR)
7. UNIVERSITAET BERN (CH)
8. PROTECTIMMUN GMBH (DE)
9. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
10. UNIVERSITAET BASEL (CH)
11. TECHNISCHE UNIVERSITAET MUENCHEN (DE)
12. UNIVERSITEIT UTRECHT (NL)
13. COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (FR)
14. MEDIZINISCHE HOCHSCHULE HANNOVER (DE)
15. TERVEYDEN JA HYVINVOINNIN LAITOS (FI)

KBBE-2007-2-2-06

EFRAIM

Impact of exogenous factors in the development of allergy

www.efraim-online.com


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

ETHERPATHS



Characterization and modelling of dietary effects mediated by gut microbiota on lipid metabolism

Dysregulation of lipid homeostasis is related to multiple major global healthcare problems today, including aging, diabetes and cardiovascular disease. It has already been shown that nutritional modulation of lipid homeostasis via direct supplementation, e.g., n-3 fatty acids, or via indirect mechanisms, e.g., dietary polyphenols, has beneficial effects on human health.

There is growing evidence that ether phospholipids such as plasmalogens play a central role in mediating the beneficial effects, but the underlying mechanisms are not understood. ETHERPATHS will develop systems biology tools that will facilitate studies of dietary interventions aiming to modulate lipid homeostasis. Specifically, it will develop:

- models that enable studies of gut microbiota and its effect on host cell metabolism,
- dynamic models of systemic lipid metabolism, and
- pathway reconstruction methods to study tissue-specific effects of dietary interventions.

All models will be optimized in the context of studies of dietary interventions and will be integrated into a sophisticated software platform. In silico strategies will be complemented by multiple experimental approaches, including

- dietary interventions involving n-3 fatty acids and polyphenols, combined with tracer studies in vitro and in vivo
- in vitro colon model
- in vivo germ-free and conventional models of altered lipid metabolism, specifically of plasmalogen deficiency.

ETHERPATHS includes academic and industrial partners with combined unique expertise in information technology, bioinformatics, metabolic and physiological modelling, systems engineering, biochemistry, microbiology, lipid metabolism, metabolomics, obesity and metabolic syndrome, and clinical nutrition.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,946,626.00

PROJECT N°

222639

DURATION

54 months

PROJECT START DATE

January 2009

LIST OF PARTNERS

1. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
2. UNIVERSITAT DE BARCELONA (ES)
3. GOETEBORGS UNIVERSITET (SE)
4. THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE (UK)
5. INSTITUTE FOR SYSTEMS BIOLOGY SPB COMPANY LIMITED (RU)
6. UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II. (IT)
7. NORAY BIOINFORMATICS SL (ES)
8. BIOMOTIF AB (SE)
9. ADVION BIOSCIENCES LTD (UK)
10. NESTEC S.A (CH)

KBBE-2007-2-2-08

ETHERPATHS

Systems Biology and bioanalytical tools
for nutrition researchwww.etherpaths.org

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

EURO DISH



Study on the need for food and health research infrastructures in Europe

Europe is facing major challenges in promoting health and reducing the disease burden of age- and diet-related NCDs by means of lifestyle, food and nutrition. Research collaboration, innovation, and capacity building are essential to efficiently benefit from the – mainly public – research resources. To realise this, EU-wide Research Infrastructures (RIs) are essential. The aim of EURO-DISH is to provide advanced and feasible recommendations on the needs for RIs to ESFRI and other stakeholders. EURO-DISH will focus on needs for integration of existing and the development of new food and health RIs that are relevant for innovations in mechanistic research and public health nutrition strategies across Europe. Building upon available projects and mappings, we will systematically map existing RIs and needs for integration of existing and new RIs, and supporting governance structures throughout Europe. Food and health research comprises multiple disciplines and a broad research area. To assure a balanced attention for the area as a whole, the mapping will be organised around the 'DISH' model: 'Determinants, Intake, Status, and Health', which represents four key building blocks of the research area as well as different stages of RI development. To go beyond existing mappings, we will synthesize the results by integrating the needs for hard & soft RIs as well as governance; moreover as this may identify newly emerging gaps and needs, it will define larger entities of required RIs. We will develop a conceptual design and roadmap for implementing the most important RIs. It will include links with basic and human science infrastructures, as well as integration and collaboration with industry, third countries and feasibility. Two case studies on RIs, identified as highly relevant by the JPI HDHL for 2012–2015, will enrich the project by designing and testing of pilot RIs that feed the overall conceptual design and roadmap, which will be aligned with on-going activities.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

1,997,946.00

PROJECT N°

311788

DURATION

36 months

PROJECT START DATE

September 2012

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. WAGENINGEN UNIVERSITEIT (NL)
3. UNIVERSITY OF SURREY (UK)
4. EUROPEAN FOOD INFORMATION COUNCIL AISBL (BE)
5. DANMARKS TEKNISKE UNIVERSITET (DK)
6. INSTITUTE OF FOOD RESEARCH (UK)
7. UNIVERSITE LYON 1 CLAUDE BERNARD (FR)
8. UNIVERSITE PARIS 13 (FR)
9. CENTRE INTERNATIONAL DE RECHERCHE SUR LE CANCER (FR)
10. RIJKSINSTITUUT VOOR VOLKSGEZONDHEIDEN MILIEU* NATIONAL INSTITUTE FOR PUBLIC HEALTH AND THE ENVIRONMENT (NL)
11. ISTITUTO NAZIONALE DI RICERCA PER GLI ALIMENTI E LA NUTRIZIONE (IT)
12. VERENIGING EUROPEAN NUTRIGENOMICS ORGANISATION (NL)
13. EUROPEAN FOOD INFORMATION RESSOURCE AISBL (BE)
14. INTERNATIONAL LIFE SCIENCES INSTITUTE EUROPEAN BRANCH AISBL (BE)
15. LUNDS UNIVERSITET (SE)

KBBE-2012-2-2-02

Study on the need for food and health research infrastructures

EURO DISH

Website not available yet



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

FIBEBIOTICS



Dietary Fibers supporting Gut and Immune Function - From polysaccharide compound to health claim

The project's goal is to support the development of functional food ingredients and products that are beneficial for the human gut and immune system and therefore of crucial importance for quality of life. The project will study the effects of specific non-digestible polysaccharides which have shown health potential in this field. The health effects of NPS will be focused around enhancing immune defence against pathogens, the reduction of infectious diseases such as the common cold and influenza in the elderly and will make use of EFSA supported biomarkers that enable immune function claims and underpin the mechanism involved. The studied mechanisms are the innate and adaptive immune system and the possible involvement of the microbiota and microbiota-mediated products. To achieve this goal new and existing NPS will be studied for their health effects in a systematic way by developing a toolbox of dedicated assays and models that can be used by industry and the authorities to study and approve food ingredients with a similar health focus. The project will: 1) perform biochemical analyses to study compounds, effect of processing and bioavailability, 2) develop standardized in vitro screening methods to be able to predict in vivo effects, 3) use dedicated in vivo and ex vivo analyses to study mechanisms of action and to validate biomarkers and 4) use and validate this knowledge in an intervention study. By combining the knowledge that will be gained from molecular, cellular and whole-organism studies, the goal will be to understand the bioactive mechanisms of these NPS and use this knowledge to design functional food products. SMEs make a very large contribution to the project, both as a beneficiary of the products and as a technology service provider related to health research. This proposed project should provide the scientific basis for international nutritional organisations to recommend an immune-related functional health claim for some of the NPS studied.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,974,556.00

PROJECT N°

289517

DURATION

54 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
3. NOFIMA AS (NO)
4. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
5. INSTITUT PASTEUR (FR)
6. CRC CLINICAL RESEARCH CENTER KIEL GMBH (DE)
7. BIOACTOR BV (NL)
8. SWEDISH OAT FIBER AB (SE)
9. GENETIC ANALYSIS AS (NO)
10. IMMITEC NORGE AS (NO)
11. PRODIGEST (BE)
12. DE GROOT-WEEVERS PHILIPPUS JOSEPHUS (NL)
13. WINCLOVE BIO INDUSTRIES BV (NL)
14. OREBRO UNIVERSITY (SE)
15. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
16. WAGENINGEN UNIVERSITEIT (NL)
17. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)

KBBE-2011-2-2-01

Development of functional foods and ingredients

FIBEBIOTICS

www.fibebiotics.eu



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

FLAVIOLA



Targeted delivery of dietary flavanols for optimal human cell function: Effect on cardiovascular health

Nutrition – or our daily diet – has a major impact on human health and disease. Various phytochemical constituents, in particular a class of compounds called flavanols, have been the focus of a great deal of attention in recent years. Flavanols are commonly present in most higher plants (those which have the xylem and phloem vascular tissues), and their high content in certain food plants, such as *Vitis Vinifera* (grape wine), *Camellia Sinensis* (tea), and *Theobroma Cacao* (cocoa) are especially noteworthy in the context of human nutrition.

In epidemiological studies, chronic flavanol intake has been associated with an incidence reduction not only of ischemic heart disease, but also of other important chronic disorders such as cerebrovascular disease, lung cancer, asthma, type 2 diabetes and prostate cancer. Recent dietary interventions in humans using foods containing flavanol have substantiated epidemiological data on an inverse relationship between dietary flavanol intake and the risk of cardiovascular disease

The latest innovations in flavanol analytics, chemistry, food processing technology, and cardiovascular function analysis make the elucidation of underlying mechanisms of flavanol bioactivity not only possible, but of practical use with regard to dietary advice and public health.

To apply these findings entails the development of novel food ingredients, and innovative nutrient-delivery matrices. FLAVIOLA aims at: explaining the cellular and sub-cellular effects of flavanols and their main human metabolites; and investigating key parameters of dietary flavanol absorption, clearance and efficacy towards surrogate markers of cardiovascular function in humans. The team is developing innovative, functional, and nutritionally responsible food matrices for optimised dietary flavanol delivery, and will demonstrate the cardiovascular benefits and safety of a new prototype food product.

The objective is to develop evidence-based dietary recommendations and innovative new products that are nutritionally responsible while able to optimise nutrient delivery. The main result expected is the establishment of an optimised flavanol-rich diet without altering the natural flavanol source or enriching dietary flavanol content.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,195.00

PROJECT N°

226588

DURATION

36 months

PROJECT START DATE

September 2009

LIST OF PARTNERS

1. HEINRICH-HEINE-UNIVERSITAET DUESSELDORF (DE)
2. MARS BELGIUM (BE)
3. THE UNIVERSITY OF READING (UK)
4. UNIVERSITEIT MAASTRICHT (NL)
5. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
6. KAROLINSKA INSTITUTET (SE)
7. UNIVERSITEIT GENT (BE)
8. SCIPROM SARL (CH)

KBBE-2008-2-2-01

Optimal human cell function and nutrition

FLAVIOLA

www.flaviola.org


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

FULL4HEALTH



Understanding food-gut-brain mechanisms across the lifespan in the regulation of hunger and satiety for health

Full4Health is a multidisciplinary European collaboration of internationally renowned laboratories investigating the mechanisms of hunger, satiety and feeding behaviour, effects of dietary components and food structure on these processes, and their possible exploitation in addressing obesity, chronic disease and under-nutrition. The proposal integrates investigation of both human volunteers (dietary/exercise intervention studies and administration of encapsulated nutrients) and laboratory animals with emphasis on neuronal, hormonal, molecular, physiological and psychological responses to food at different stages of the life course. We will apply imaging and other cutting edge technologies in both humans and rodents to answer critical research questions at different levels of the food-gut-brain axis. In human volunteers, responses to diet will be investigated from childhood through to the elderly, whereas wide-ranging cutting-edge rodent studies will investigate related issues such as early developmental programming the food-gut-brain axis, multiple feedback signalling interactions, and inflammation-induced anorexia. The project will examine the interaction of food and dietary components with the gastrointestinal tract, and will characterise the role of gut endocrine secretions, the vagus nerve, and hindbrain, hypothalamic and forebrain structures in signalling and integration of hunger and satiety. Physiological and psychological responses to food may change as we develop and age, with impact on food choices and preferences. This is a critical issue in the battle against food intake-related chronic disease, most commonly driven by over-consumption, but also in consideration of relative under-nutrition in the elderly and clinically compromised.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

8,992,613.00

PROJECT N°

266408

DURATION

60 months

PROJECT START DATE

February 2011

LIST OF PARTNERS

1. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
2. HAROKOPIO UNIVERSITY (EL)
3. UNIVERSITY OF LEEDS (UK)
4. UNIVERSITAIR MEDISCH CENTRUM UTRECHT (NL)
5. UNIVERSITEIT MAASTRICHT (NL)
6. THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE (UK)
7. GOETEBORGS UNIVERSITET (SE)
8. NORGES TEKNISK-NATURVITENSKAPELIGE UNIVERSITET NTNU (NO)
9. THE UNIVERSITY OF EDINBURGH (UK)
10. UNIVERSITE DE LILLE II - DROIT ET SANTE (FR)
11. MW ENCAP LIMITED (UK)
12. KLINIKUM DER UNIVERSITAET ZU KOELN (DE)
13. KØBENHAVNS UNIVERSITET (DK)
14. DANONE RESEARCH BV (NL)
15. WAGENINGEN UNIVERSITEIT (NL)

KBBE-2010-2-2-01

FULL4HEALTH



Neurological pathways regulating hunger/
satiety and gut behaviour

www.full4health.eu



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

INSTAPA



Novel staple food-based strategies to improve micronutrient status for better health and development in sub-Saharan Africa

This project aims to identify novel staple food-based approaches to improve micronutrient malnutrition in order to improve the health and development of women and children in sub-Saharan Africa. It will focus on the improvement of millet-, sorghum-, maize-, and cassava based (complementary) foods. The genetic potential of staple foods for increasing their micronutrient and decreasing their anti-nutrient content will be evaluated. The success or failure of introducing such bio-fortified staple foods in local farming systems will be assessed. The efficacy of bio-fortified staple foods with adequate levels of provitamin A will be determined.

The project will develop improved (traditional) processing methods of the staple foods concerned to enhance micronutrient uptake and bioavailability. The developed approaches in the area of bio-fortification, fortification and processing will be compared on efficacy of improving iron and zinc intake and status. The effect of the improved staple foods on immunity and infection will be evaluated as well as the impact on cognitive development of young children.

The project will improve the quality of the staple foods (maize, millet and cassava) consumed in many rural areas of Africa. Although millet is actually the sixth most important crop in the world, it is still only grown by small, impoverished farmers. Three different strategic approaches will result in production of foods with improved nutritional quality. First, varieties of the above crops that naturally contain higher levels of vitamins and minerals will be identified. These include a cassava variety with a natural higher level of vitamin A. Research will show whether consumption of this so-called 'yellow' cassava actually results in improved vitamin A status of children. As a second strategy, the benefits of enriching products made from staple foods with leafy vegetables will be studied. These include maize meal, a staple ingredient for many meals in Africa. The third strategy will show whether the levels of available iron, zinc or vitamin A can be improved with specific preparation methods.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,900,284.00

PROJECT N°

211484

DURATION

60 months

PROJECT START DATE

June 2008

LIST OF PARTNERS

1. WAGENINGEN UNIVERSITEIT (NL)
2. Eidgenössische Technische Hochschule Zürich (CH)
3. INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT (FR)
4. LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE (UK)
5. UNIVERSITY OF KWAZULU-NATAL (ZA)
6. UNIVERSITE D ABOMEY CALAVI UAC (BJ)
7. INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS (IN)
8. UNIVERSITY OF NAIROBI (KE)
9. CENTRE NATIONAL DE RECHERCHE SCIENTIFIQUE ET TECHNOLOGIQUE (BF)
10. INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE - IFPRI (US)
11. INTERNATIONAL INSTITUTE OF TROPICAL AGRICULTURE (NG)

KBBE-2007-2-2-03

INSTAPA



Optical technologies for monitoring the human nutrition status and the onset of nutrition-related health problems

www.instapa.org



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

LIPIDI DIET



Theurapeutic and preventive impact of nutritional lipids on neuronal and cognitive performance in aging, alzheimer's disease and vascular dementia

The project aims to develop nutrition which is more effective than the dietary supplements currently available. The disease prevention potential of lipid-based nutrition will be examined in a clinical trial, and the team will decipher the molecular pathways that lead to neurodegeneration/Alzheimer's disease. Evaluations will focus on effectiveness and the identification of environmental and other epidemiological risk factors for dementia.

The project will help make dietary advice and actual dietary products available to clinics, nursing homes and citizens.

The project addresses the Impact of Nutritional Lipids on Neuronal and Cognitive Performance in Ageing, Alzheimer's disease and Vascular dementia. Previous observations suggest that lipids alter the risk for dementia. Some omega-3 lipids in particular appear to lower the risk of Alzheimer's. The major aim is to complement existing medical treatment of Alzheimer's disease with nutrition, especially at the very first stages of the disease.

But the project does not stop at Alzheimer's; dietary products that maintain and support normal cognitive function in healthy ageing in general – and help reduce cerebrovascular risks – will also be developed. In addition to dietary products, the team will produce diet and lifestyle-based healthcare advice for the elderly.

The project is based on two elements: applied research documenting the value of nutritional support in persons at risk of developing Alzheimer's disease, and basic research generating more knowledge about the possible therapeutic and preventive effects of dietary lipids in model systems of Alzheimer's disease and Vascular dementia.

The aim is to develop a lipid based diet that reduces the risk of Alzheimer's and related diseases and has a stabilising effect on cognitive performance in ageing. Furthermore, it will provide diet and lifestyle-based healthcare advice for the elderly.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,899,843.00

PROJECT N°

211696

DURATION

72 months

PROJECT START DATE

August 2008

LIST OF PARTNERS

1. UNIVERSITAET DES SAARLANDES (DE)
2. ITÄ-SUOMEN YLIOPISTO (FI)
3. SZEGEDI TUDOMANYEGYETEM (HU)
4. TEL AVIV UNIVERSITY (IL)
5. STICHTING KATHOLIEKE UNIVERSITEIT (NL)
6. GOETEBORGS UNIVERSITET (SE)
7. DANONE RESEARCH BV (NL)
8. KAROLINSKA INSTITUTET (SE)
9. FYZIOLOGICKY USTAV AKADEMIE VED CESKE REPUBLIKY VEREJNA VYZKUMNA INSTITUTE (VVI) (CZ)
10. VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG (NL)
11. RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITAET BONN (DE)
12. EUROPEAN RESEARCH AND PROJECT OFFICE GMBH (DE)
13. UNIVERSITAETSKLINIKUM AACHEN (DE)
14. UNIVERSITAETSKLINIKUM HEIDELBERG (DE)
15. EBERHARD KARLS UNIVERSITAET TUEBINGEN (DE)
16. ZENTRALINSTITUT FUER SEELISCHE GESUNDHEIT (DE)
17. KLINIKUM DER UNIVERSITAET REGENSBURG (DE)
18. LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN (DE)

KBBE-2007-2-2-02

Impact of diet on ageing

LIPIDI DIET

www.lipididiet.progressima.eu


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

NEUROFAST



The Integrated Neurobiology of Food Intake, Addiction and Stress

NeuroFAST is a multidisciplinary project, involving 12 teams from 7 countries. The project is exploring the neurobiology of stress, addiction and eating behaviour and the complex socio-psychological forces that lead to the deregulation of these interconnected events and processes. These forces include dietary components (including highly palatable foods and alcohol; some of which may have addictive properties), as well as cultural and social pressures, everyday stressors, and family-genetic influences.

To provide scientific support for European public health policies, a focus will be on a socio-psychological analysis of determinants of food addiction and substance abuse, and of how risk factors like stress in the workplace are encouraging disadvantageous behaviour. The consortium will establish an evidence base for inter-relationships, linking eating disorder research with obesity, stress and addiction research, and involving studies of selected individual food components using novel designed foods with controlled components. In summary, the consortium will use a synergistic combination of controlled laboratory studies, characterisation of patient groups, and examination of real world scenarios based on epidemiological community samples that will be relevant to policy development.

The over-arching high-level impact anticipated for the NeuroFAST project is to gain more insight into the effect of dietary factors and measures of mood, anxiety and stress on the development of diet-related diseases and disorders and substance abuse, and to generate the evidence base for the interaction between feeding behaviour and physiological and psychological function.

A greater understanding of beneficial and harmful dietary factors, and the links between stress, eating behaviour and addiction, will reduce the burden placed on healthcare systems by improving the health status of the population.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,984.00

PROJECT N°

245009

DURATION

60 months

PROJECT START DATE

April 2010

LIST OF PARTNERS

1. GOETEBORGS UNIVERSITET (SE)
2. UNIVERSITAIR MEDISCH CENTRUM UTRECHT (NL)
3. ALMA MATER STUDIUM-UNIVERSITA DI BOLOGNA (IT)
4. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
5. THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE (UK)
6. UNIVERSITAETSKLINIKUM ESSEN (DE)
7. THE UNIVERSITY OF EDINBURGH (UK)
8. TECHNISCHE UNIVERSITAET DRESDEN (DE)
9. UNIVERSIDADE DE SANTIAGO DE COMPOSTELA (ES)
10. INSTITUTE OF EXPERIMENTAL MEDICINE - HUNGARIAN ACADEMY OF SCIENCES (HU)
11. NIZO FOOD RESEARCH BV (NL)
12. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
13. FONDAZIONE TOSCANA GABRIELE MONASTERIO PER LA RICERCA MEDICA E DI SANITA PUBBLICA (IT)

KBBE-2009-2-2-01

Stress, addiction and eating behaviour

NEUROFAST

www.neurofast.eu



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

NU-AGE



New dietary strategies addressing the specific needs of elderly population for an healthy ageing in Europe

NuAge is a large multidisciplinary consortium (28 partners, from 16 EU countries) involving nutritionists, biogerontologists, immunologists and molecular biologists from the most prestigious institutions in Europe, 4 large food industries, 8 food and 1 biotech SMEs, SPES GEIE and CIAA, covering the SME Food Industrial Association of 13 European countries and the European Confederation the food and drink industry. NuAge aims are: 1. to counteract the physical/cognitive decline occurring in the elderly as a consequence of the progressive alteration of different organs/systems (immune and cardiovascular systems, bone, brain, muscle and intestine) by one year elderly-tailored whole diet intervention on 1250 healthy elderly men and women aged 65-79 years (half diet, half control) from 5 different EU regions; 2. to assess the effect of the newly designed food pyramid specific for 65+ EU citizens on the different organs/systems using a large set of biomarkers related to nutrition and ageing, with particular attention to the low grade, chronic, systemic inflammatory status named inflammageing, a major risk factor for common age-related diseases; 3. to perform in a subgroup of 100 subjects in depth studies and high throughput “omics” to identify cellular/molecular targets/mechanisms responsible for whole diet effect; 4. to perform genetic and epigenetic studies to assess the role of individual variability on the response to diet; 5. to adopt an integrative comprehensive approach (systems biology) to analyze the whole set of data. The results of dietary intervention will be used to develop elderly-tailored prototypes of functional foods and to improve traditional foods. The research activity will be accompanied and followed by a strong activity of dissemination and industrial exploitation to support EU strategies on nutritional recommendations, thus contributing to the implementation of legislation related to nutritional and health claims for elderly in Europe.

PROJECT COORDINATOR

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FUNDING SCHEME CP

EC CONTRIBUTION € 8,998,889.00

PROJECT N° 266486

DURATION 60 months

PROJECT START DATE May 2011

LIST OF PARTNERS

1. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
2. UNIVERSITY OF EAST ANGLIA (UK)
3. WAGENINGEN UNIVERSITEIT (NL)
4. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
5. SPREAD EUROPEAN SAFETY GEIE (IT)
6. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
7. INSTITUTE OF FOOD RESEARCH (UK)
8. SZKOLA GLOWNA GOSPODARSTWA WIEJSKIEGO (PL)
9. CONFEDERATION DES INDUSTRIES AGRO-ALIMENTAIRES DE L'UE (BE)
10. EUROPEAN FOOD INFORMATION COUNCIL AISBL (BE)
11. MAA JA ELINTARVIKETA LOUDEN TUTKIMUSKESKUS (FI)
12. ETHNIKO IDRYMA EREVNON (EL)
13. STRATICELL SCREENING TECHNOLOGIES (BE)
14. THE UNIVERSITY OF READING (UK)
15. KAROLINSKA INSTITUTET (SE)
16. VALIO OY (FI)
17. OREBRO UNIVERSITY (SE)
18. LESIEUR SAS (FR)
19. VILLANI SPA (IT)
20. PANCRAZIO SPA (IT)
21. NEWSOL SAS (FR)
22. WIESBAUER GOURMET GASTRO GMBH (AT)
23. VIDRERES LLET, S.L. (ES)
24. ZEELANDIA SPOL SRO (CZ)
25. MAKEDONIKI VIOMIHANIA GALAKTOS ANONIMOS ETERIA (MEVGAL SA) (EL)
26. YORUK SUT URUNLERI HAYVANCILIK GIDA SANAYI VE TICARET LIMITED SIRKETI (TR)
27. NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO (NL)
28. CENTRE DE RECHERCHE EN NUTRITION HUMAINE D'AUVERGNE (FR)
29. NESTEC S.A (CH)
30. MIRELITE MIRSA ZARTKORUEN RESZVENYTARSASAG (HU)

KBBE-2010-2-2-02

NU-AGE



Diet and prevention of functional decline of the elderly

www.nu-age.eu



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

NUTRIMENTHE



Effect of diet on the mental performance of children

There is evidence that early nutrition may affect later mental performance, which has major implications for public health practice, policy development and our understanding of human biology. It also has repercussions for food product development, economic progress and future wealth creation. However, much of the evidence to date is from animal, retrospective studies and short-term nutritional intervention studies in humans.

This project aims to significantly improve knowledge in this area by studying the role, mechanisms, risks and benefits of specific nutrients and food components for the mental performance of children. The team is focusing on development from the foetal stage to childhood. The nutrients addressed include long-chain polyunsaturated fatty acids (LC-PUFAs), minerals (iron and zinc) and B-vitamins as these have previously been indicated as important for mental performance.

The project will follow up on randomised clinical intervention trials with specific nutrients initiated during pregnancy, infancy and childhood, establish quantitative requirements for n-3 LCPUFAs in children with restricted diet, and carry out a quantitative assessment of the interaction between nutrition and genetic variation with respect to mental performance. It will also develop a neuropsychological battery for common assessment of mental performance in the EU, together with consistent and clear pan-European recommendations on dietary requirements for children.

Of the nutrients addressed, there is still a lack of clarity and little consensus on their role in neurodevelopment, mental performance and mental illness. The project aims to address this, especially with respect to LC-PUFAs, as their role is currently the subject of much debate in Europe.

The project will also address key issues in mental health in EU children where diet could play a role, for example cognitive development and cognition, anxiety/stress, Attention Deficit Hyperactivity disorder, depression and other related conditions.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,902,570.00

PROJECT N°

212652

DURATION

70 months

PROJECT START DATE

March 2008

LIST OF PARTNERS

1. UNIVERSIDAD DE GRANADA (ES)
2. LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN (DE)
3. UNILEVER RESEARCH AND DEVELOPMENT VLAARDINGEN BV (NL)
4. ERASMUS UNIVERSITEIT MEDISCH CENTRUM ROTTERDAMERASMUS MC (NL)
5. UNIVERSIDAD ROVIRA I VIRGILI (ES)
6. UNIVERSITY OF SURREY (UK)
7. PECSI TUDOMÁNYEGYETEM - UNIVERSITY OF PECS (HU)
8. UNIVERSITÀ DEGLI STUDI DI MILANO (IT)
9. WARSZAWSKI UNIWERSYTET MEDYCZNY (PL)
10. BIRMINGHAM CHILDRENS HOSPITAL NHS FOUNDATION TRUST (UK)
11. INSTYTUT POMNIK CENTRUM ZDROWIA DZIECKA (PL)
12. FUNDACION PUBLICA MARQUES DE VALDECILLA (ES)
13. INSTITUT FÜR MARKTFORSCHUNG STRATEGIE & PLANUNG GBR (DE)
14. UNIVERSITÉ LIBRE DE BRUXELLES (BE)
15. SHS INTERNATIONAL LTD (UK)
16. UNIVERSITY OF BRISTOL (UK)
17. HELMHOLTZ ZENTRUM MÜNCHEN DEUTSCHESFORSCHUNGSZENTRUM FÜR GESUNDHEIT UND UMWELT GMBH (DE)
18. BETA TECHNOLOGY LTD (UK)
19. MARTEK BIOSCIENCES CORPORATION (US)
20. NEURON BIOPHARMA SA (ES)
21. SERVICIO CÁNTABRO DE SALUD (ES)

KBBE-2007-2-2-01

Effect of diet on mental performance of children

NUTRIMENTHE

www.nutrimenthe.eu



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

NUTRITECH



Application of new technologies and methods in nutrition research – the example of phenotypic flexibility

NutriTech will build on the foundations of traditional human nutrition research using cutting-edge analytical technologies and methods to comprehensively evaluate the diet-health relationship and critically assess their usefulness for the future of nutrition research and human well-being. Technologies include genomics, transcriptomics, proteomics, metabolomics, laser scanning cytometry, NMR based lipoprotein profiling and advanced imaging by MRI/MRS. All methods will be applied in an integrated manner to quantify the effect of diet on “phenotypic flexibility”, based on metabolic flexibility (the capacity for the organism to adapt fuel oxidation to fuel availability). However, NutriTech will move beyond the state-of-the-art by applying these integrated methods to assess the underlying and related cell biological and genetic mechanisms and multiple physiological processes of adaptation when homeostasis is challenged. Methods will in the first instance be evaluated within a human intervention study, and the resulting optimal methods will be validated in a number of existing cohorts against established endpoints.

NutriTech will disseminate the harmonised and integrated technologies on a global scale by a large academic network including 6 non-EU partners and by providing an integrated and standardised data storage and evaluation platform. The impact of NutriTech will be multifold and exploitation is crucial as major breakthroughs from our technology and research are expected. This will be achieved by collaboration with a consortium of 8 major food industries and by exploitation of specific technologies by our 6 SME partners. Overall, NutriTech will lay the foundations for successful integration of emerging technologies into nutrition research.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,986,491.00

PROJECT N°

289511

DURATION

48 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO (NL)
2. TECHNISCHE UNIVERSITEIT MÜNCHEN (DE)
3. IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE (UK)
4. UNIVERSITETET I OSLO (NO)
5. WAGENINGEN UNIVERSITEIT (NL)
6. UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN (IE)
7. MEDICAL UNIVERSITY OF VARNA (BG)
8. CENTRE INTERNATIONAL DE RECHERCHE SUR LE CANCER (FR)
9. ISTITUTO SUPERIORE DI SANITA (IT)
10. UNIVERSIDAD DE CORDOBA (ES)
11. VERENIGING EUROPEAN NUTRIGENOMICS ORGANISATION (NL)
12. INTERNATIONAL LIFE SCIENCES INSTITUTE EUROPEAN BRANCH AISBL (BE)
13. EDI EXPERIMENTELLE UND DIAGNOSTISCHE IMMUNOLOGIE GMBH (DE)
14. PAPRIKA-BIOANALYTICS SZOLGALTATO ESTANACSADO BT (HU)
15. VITAS AS (NO)
16. BIQUALYS BV (NL)
17. BIOCRATES LIFE SCIENCES AG (AT)
18. UNIVERSITY OF ALBERTA (CA)
19. THE GOVERNING COUNCIL OF THE UNIVERSITY OF TORONTO (CA)
20. COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION (AU)
21. THE UNIVERSITY OF AUCKLAND (NZ)
22. FUNDACION IMDEA ALIMENTACION (ES)
23. TRUSTEES OF TUFTS COLLEGE CORPORATION (US)

KBBE-2011-2-2-02

NUTRITECH



New technologies and tools and their potential application to nutrition research

www.nutritech.nl



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

PATHWAY-27



Pivotal assessment of the effects of bioactives on health and wellbeing. From human genoma to food industry - pathway

Scientific understanding of the role and mechanisms of bioactives is fragmented. Research often addresses the theoretical possibility of health improvement effects rather than their real, practical use for everyday diets. Bioactives cannot be considered as discrete chemical compounds and research must focus on bioactive-enriched foods (BEF), if consumer demands for foods delivering appropriate health and wellbeing benefits are to be fulfilled.

PATHWAY-27, a pan-European interdisciplinary team of 16 life/social scientists and 10 high tech/ food processing SMEs, uniquely addresses the role and mechanisms of action of 3 bioactives (docosahexaenoic acid, β -glucan, anthocyanins, chosen for known/claimed effectiveness in reducing some risk factors of Metabolic Syndrome (MS), enriching 3 different widely-consumed food matrices (dairy-, bakery-, egg products). Critical evaluation of bioactive-food matrix interactions and determining the extent of synergies between the 3 bioactives are key elements of PATHWAY-27.

PATHWAY will determine the impact of BEF on physiologically-relevant MS (a risk factor for many diseases) endpoints and deliver a better understanding of the role and mechanisms of action of the 3 bioactives and BEF. Parallel in vitro/in vivo studies will enable selection of robust biomarkers by advanced omics techniques.

Deliverables will include BEF and generic protocols, best practices and guidelines for planning dietary interventions, and guidance to SMEs for producing health-promoting BEF and for submitting convincing health claim dossiers to EFSA; the latter will be greatly facilitated by one SME partner who has submitted 3 successful dossiers. PATHWAY guidelines will be generic and will apply to a wide range of bioactives and BEF.

Impact will be optimised across Europe by targeted dissemination to industry (especially SME), consumer and S&T stakeholders. Young people will be trained in a stimulating interdisciplinary, trans-sectoral environment.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,231.00

PROJECT N°

311876

DURATION

60 months

PROJECT START DATE

February 2013

LIST OF PARTNERS

1. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
2. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
3. KAROLINSKA INSTITUTET (SE)
4. MAX RUBNER INSTITUT BUNDESFORSCHUNGSINSTITUT FUR ERNAHRUNG UND LEBENSMITTEL (DE)
5. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
6. DEUTSCHES KREBSFORSCHUNGSZENTRUM (DE)
7. UNIVERSITY OF LEEDS (UK)
8. SYDDANSK UNIVERSITET (DK)
9. ASOCIACION DE INVESTIGACION DE LA INDUSTRIA AGROALIMENTARIA. (ES)
10. CENTRE DE RECHERCHE EN NUTRITION HUMAINE D'AUVERGNE (FR)
11. THE LEEDS TEACHING HOSPITALS NATIONAL HEALTH SERVICE TRUST (UK)
12. EGE UNIVERSITESI (TR)
13. CAMPDEN BRI MAGYARORSZAG NONPROFIT KORLATOLT FELELOSSEGU TARSASAG (HU)
14. INTERNATIONAL LIFE SCIENCES INSTITUTE EUROPEAN BRANCH AISBL (BE)
15. LEBENSMITTELVERSUCHSANSTALT (AT)
16. JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
17. INTERNATIONAL FOOD NETWORK (UK)
18. ADWARE RESEARCH FEJLESZTO ES TANACSADO KFT (HU)
19. GIOTTO BIOTECH (IT)
20. NGB GENETICS (IT)
21. APPLICATIONS SANTE DES LIPIDES SARL (FR)
22. ABRO BIOTEC SL (ES)
23. SWEDISH OAT FIBER AB (SE)
24. ADEXGO IPARI, KERESKEDELMI ES SZOLGALTATO KFT (HU)
25. DESARROLLOS PANADEROS LEVANTINOS SLL (ES)

KBBE-2012-2-2-01

Beneficial effects of bioactive compounds in humans

PATHWAY-27

Website not available yet



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

PREVIEW



PREvention of diabetes through lifestyle Intervention and population studies in Europe and around the World

The primary goal of PREVIEW is to identify the most efficient lifestyle pattern for the prevention of type-2 diabetes in a population of pre-diabetic overweight or obese individuals. The project comprises two distinct lines of evidence, both embracing European and overseas countries:

- 1) A multicentre, clinical randomized intervention trial of 3 year duration with a total of 2 500 pre-diabetic participants, including children and adolescents, adults and elderly
- 2) Large population studies using data from all age groups.

Focus in both lines of evidence will be on diet (specifically protein and glycemic index) and intensity of physical activity, as well as their interaction with the lifestyle factors, habitual stress and sleeping pattern as well as behavioural, environmental, cultural, and socioeconomic variables.

PREVIEW will significantly increase our knowledge on how specific lifestyle factors can help preventing type-2 diabetes. Type-2 diabetes accounts for about 90% of all cases of diabetes, primarily caused by the worldwide obesity epidemic. Diabetes is a costly disease and according to WHO, the direct health care costs of diabetes range from 2.5% to 15% of annual national health care budgets. This worrying trend calls for action and a need for a variety of innovative approaches. PREVIEW aims to be such an innovative attempt including all necessary disciplines and stakeholders, who can contribute to developing new ways for the prevention of this wide-spread life-style related disease.

The strategic impact of PREVIEW concerns the massive problems associated with the global diabetes epidemic (obesity and type-2 diabetes) and therefore includes partners from Europe (East, West, North and South) and Australia, New Zealand, and Canada. PREVIEW will thereby contribute to improving health over the life-span of the population in Europe as well as worldwide. Overall the public health and socio-economic impact of PREVIEW is expected to be very significant.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

8,993,475.00

PROJECT N°

312057

DURATION

60 months

PROJECT START DATE

January 2013

LIST OF PARTNERS

1. KØBENHAVNS UNIVERSITET (DK)
2. HELSINGIN YLIOPISTO (FI)
3. WAGENINGEN UNIVERSITEIT (NL)
4. UNIVERSITEIT MAASTRICHT (NL)
5. THE UNIVERSITY OF NOTTINGHAM (UK)
6. UNIVERSIDAD DE NAVARRA (ES)
7. MEDICAL UNIVERSITY OF SOFIA (BG)
8. SWANSEA UNIVERSITY (UK)
9. UNIVERSITAET STUTTART (DE)
10. MEYERS MADHUS AS (DK)
11. NETUNION SARL (CH)
12. TERVEYDEN JA HYVINVOINNIN LAITOS (FI)
13. THE UNIVERSITY OF SYDNEY (AU)
14. THE UNIVERSITY OF AUCKLAND (NZ)
15. UNIVERSITE LAVAL (CA)

KBBE-2012-2-2-03

PREVIEW

Impact of lifestyle on well-being
and diet-related disease

Website not available yet



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

SMILING



Sustainable Micronutrient Interventions to Control Deficiencies and Improve Nutritional Status and General Health in Asia

Interventions to improve nutritional status are of critical importance to achieve Millennium Development Goals (MDGs). Micronutrient deficiencies, mainly iron, zinc, vitamin A and iodine deficiencies affect billions of people worldwide, are responsible for more than one million child deaths per year and prevent a third of the world's children from reaching their intellectual and physical potential. The SMILING project "Sustainable Micronutrient Interventions to control deficiencies and Improved Nutritional status and General health in Asia" will produce a new, feasible and sustainable nutrition intervention agenda, which will be country-specific and directed to women of reproductive age (non-pregnant women, pregnant and lactating women) and young children under 2 years of age. The project focuses specifically on the South-East Asian region because of the diversity in the extent and severity of malnutrition in that region and on the diversity of political, economic, social and cultural contexts. The SMILING proposal deliberately avoids expressing pre-conceived views on which interventions should be prioritized currently or in the future as the deliverables of the action will reflect the views and opinions of a wide range of stakeholders in the region who will be consulted during the project.

The ultimate objective of the action is to integrate priorities for appropriate, efficient, feasible and sustainable interventions to improve micronutrient status, health and development of women of reproductive age and young children primarily into the national policies of the five target countries in SE Asia and in the agenda of the civil society, private sector, international organizations and NGOs. The goal is not only protecting people from hunger but also to guarantee food and nutritional security to these most vulnerable groups, thereby contributing directly to MDG1, MDG5 and MDG4 and as well by extension to MDG2 and MDG6.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

1,999,345.00

PROJECT N°

289616

DURATION

24 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT (FR)
2. MINISTRY OF AGRICULTURE, FORESTRY AND FISHERIES (KH)
3. MINISTRY OF HEALTH (KH)
4. KØBENHAVNS UNIVERSITET (DK)
5. THE SOUTHEAST ASIAN MINISTERS OF EDUCATION ORGANIZATION (ID)
6. MINISTRY OF HEALTH (LA)
7. VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG (NL)
8. WAGENINGEN UNIVERSITEIT (NL)
9. MAHIDOL UNIVERSITY (TH)
10. LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE (UK)
11. MINISTRY OF HEALTH OF VIETNAM (VN)

KBBE-2011-2-2-04

SMILING



Translation mechanisms for targeting interventions on micro-nutrients — Mandatory South Asia and South East Asia

www.nutrition-smiling.eu



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

SUNRAY



Sustainable Nutrition Research for Africa in the Years to come

This is a critical time for nutrition. Malnutrition rates remain high, particularly in sub-Saharan Africa where only nine out of 46 countries are on track to achieve the first Millennium Development Goal target of a 50% reduction in underweight prevalence among children under five years. Despite the huge cost of malnutrition, investment in the nutrition sector has been insufficient. There has been a renewed interest in nutrition recently, however, and it is a potentially opportune moment for investing in nutrition research.

The SUNRAY (Sustainable Nutrition Research for Africa in the Years to come) project will produce a new, sustainable nutrition research agenda for sub-Saharan Africa based on five concepts.

- 1) Future landscape: Emergence of new nutritional challenges due to changes in the environmental landscape.
- 2) Sustainable and broad-based solutions: Integration of nutrition research within other sectors to ensure sustainable solutions.
- 3) African centre of gravity: Identification of research opportunities and constraints by African institutions.
- 4) Broad stakeholder involvement: Strengthening of the link between research and action.
- 5) Political engagement: Engagement of policy-makers to ensure political buy-in and subsequent action.

SUNRAY has seven work packages: WP1 optimises communication and coordination within the Consortium. WP2 maps current nutrition research activities in sub-Saharan Africa, and examines the operating environment. WP3 analyses the views of stakeholders. WP4 examines the impact of environmental changes on nutrition. WP5 builds consensus on research priorities through workshops in three African regions. WP6 develops a strategic framework for future research in the form of a roadmap. WP7 disseminates project outputs. The SUNRAY Consortium has four African and five European institutions and an Advisory Group of six external experts with complementary expertise. The total budget of 968,463 Euros is for a period of 18 months.

AFRICA-2010

SUNRAY



Identifying research needs on malnutrition
in Africa – Mandatory Africa

www.sunrayafrica.co.za



PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

968,463.05

PROJECT N°

266080

DURATION

24 months

PROJECT START DATE

January 2011

LIST OF PARTNERS

1. PRINS LEOPOLD INSTITUUT VOOR TROPISCHE GENEESKUNDE (BE)
2. INTERNATIONAL FOUNDATION FOR SCIENCE STIFTELSE*IFS (SE)
3. WAGENINGEN UNIVERSITEIT (NL)
4. NOORDWES-UNIVERSITEIT (ZA)
5. SOKOINE UNIVERSITY OF AGRICULTURE (TZ)
6. FACULTÉ DES SCIENCES AGRONOMIQUES, UNIVERSITÉ D'ABOMEY-CALAVI (BJ)
7. INSTITUT DE RECHERCHE POUR LE DEVELOPPEMENT (FR)
8. MAKERERE UNIVERSITY (UG)
9. FUNDACIO INTERMON OXFAM (ES)
10. THE UNIVERSITY OF SHEFFIELD (UK)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-2 Nutrition

TORNADO



Molecular Targets Open for Regulation by the gut flora – New Avenues for improved Diet to Optimize European health

TORNADO is determining the influence of diet on the gut flora, as well as the impact of gut flora on the immune system/other organ systems. The team is investigating molecular targets that are subject to regulation by the gut flora and diet that sustain health.

This will be done with an increasing level of specificity, from investigations of dietary habits and health in population cohorts, through to intervention studies with humans and animals. The team will also analyse the intestine and immune system, as well as organs like adipocyte tissue, the liver and brain. The goal is then to pinpoint the impact of dietary influence on cells and on potential functional molecular targets.

The TORNADO team also aims to increase cooperation between different scientific disciplines in general, and step up and consolidate existing interdisciplinary cooperation between TORNADO partners specifically.

The TORNADO consortium combines a systemic and comprehensive mechanistic approach with a focus on interdisciplinary skills provided by world leading experts working in close harmony with the food industry. TORNADO will enable broader applications, faster development, and more solid evidence for health claims based on detailed and thorough in-depth assessment of underlying mechanisms relevant to the health effects of dietary products compared to traditional approaches.

TORNADO will deliver data that can be used to recommend biomarkers for evaluating the effects of diet or microbes. The data will refute, substantiate or improve health claims made by manufacturers of existing products and generate novel functional food products.

TORNADO's approach of microbe-to-mouse-to-man, used to investigate dietary influence, will provide the basis for more solid evidence for health claims and provide concrete deliverables e.g. Roadmaps to Health, Tailor-made Health-monitoring. The project will also accelerate the future design of personalised functional food for specific target groups.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,895,601.00

PROJECT N°

222720

DURATION

48 months

PROJECT START DATE

September 2009

LIST OF PARTNERS

1. KAROLINSKA INSTITUTET (SE)
2. INSTITUT PASTEUR (FR)
3. QUEEN MARY AND WESTFIELD COLLEGE, UNIVERSITY OF LONDON (UK)
4. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
5. HELSINGIN YLIOPISTO (FI)
6. VARSINAIS-SUOMEN SAIRAANHOITOPIIRIN KUNTAYHTYMA (FI)
7. GOETEBORGS UNIVERSITET (SE)
8. UNIVERSITE DE LAUSANNE (CH)
9. KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN - KNAW (NL)
10. UMEA UNIVERSITET (SE)
11. REGION HOVEDSTADEN (DK)
12. DEBRECENI EGYETEM (HU)
13. DEUTSCHES INSTITUT FUER ERNAEHRUNGSFORSCHUNG POTSDAM REHRUCKE (DE)
14. INSTITUTE OF FOOD RESEARCH (UK)
15. OY FOODFILES LTD (FI)
16. STORKBIO (EE)
17. CYCLOLAB CIKLODEXTRIN KUTATO-FEJLES (HU)
18. SCANDINAVIAN CLINICAL NUTRITION I SVERIGE AB (SE)
19. SOREDAB SAS (FR)
20. ARLA FOODS AMBA (DK)
21. OLA AND MARTIN STEINBERG HOLDING AB (SE)
22. LUDWIG-MAXIMILIANS-UNIVERSITAET MUENCHEN (DE)
23. INBIO OU (EE)

KBBE-2007-2-2-07

TORNADO

Diet and its effect on the development of
intestinal microflora and on the immune
system through the entire life span

www.fp7tornado.eu


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

AFTER



African Food Tradition Revisited by Research

AFTER aims to revisit traditional African products, knowledge and know-how in the light of new technologies for the benefit of consumers, producers and processors in Africa and Europe. By applying European science and technology to traditional African food products, AFTER seeks to turn research into quantifiable and innovative technologies and products that are commercially viable in both European and African markets. The ten selected products, representing three families of foods (fermented cereal-based, fermented salted fish and meat, and vegetable and fruit based functional foods), fit into a matrix of technologies and processes shared between Europe and Africa.

The main overall objectives of this project are to obtain comprehensive scientific knowledge of the existing know-how on technologies, processes and products; to propose improved traditional processes through a re-engineering of the unit operations with the aim of improving the safety and nutritional quality, while keeping or improving the organoleptic characteristics of traditional food products; to use objective criteria for acceptability of the traditional products by the consumers, and to ensure that the products can effectively access the EU markets in view of regulatory and ethical issues, while also protecting the intellectual rights of the people in Africa; to present the results into ready-to-use information for food companies including SMEs via guidelines on quality management, food law and regulation and consumer protection, and to transfer the results to the stakeholders from Africa and from the EU.

The improved products, produced through re-engineering and new processing technologies, will be tested for consumer acceptance, safety and nutritional quality. The market and entry requirements for new products will be assessed. Involving EU and African companies in production trials for the improved products provides the food companies with ready-to-use information.

New technologies originating in Europe will be applied to traditional African production. The new products manufactured will then be imported back to Europe. The final strategy will be to implement the sharing of the African traditional know-how with Europe to develop new technologies and/or new products both in Africa and in Europe.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,929,585.00

PROJECT N°

245025

DURATION

45 months

PROJECT START DATE

September 2010

LIST OF PARTNERS

1. CENTRE DE COOPERATION INTERNATIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
2. UNIVERSITE D ABOMEY CALAVI UAC (BJ)
3. COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (ZA)
4. ALEXANDRIA UNIVERSITY (EG)
5. UNIVERSITY OF ANTANANARIVO (MG)
6. ASSOCIATION DE COORDINATION TECHNIQUE POUR L'INDUSTRIE AGROALIMENTAIRE (FR)
7. UNIVERSITE CHEIKH ANTA DIOP DE DAKAR (SN)
8. UNIVERSITE DE NGOUNDERE (CM)
9. UNIVERSIDADE CATOLICA PORTUGUESA (PT)
10. UNIVERSITY OF GREENWICH (UK)
11. ASSOCIATION AFRIQUE AGRO EXPORT (SN)
12. SPREAD EUROPEAN SAFETY GEIE (IT)
13. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
14. COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (GH)
15. RACINES SA (FR)
16. NATIONAL RESEARCH CENTER (EG)

KBBE-2009-2-3-02

Sharing food technology research and development
by means of international collaboration – SICA

AFTER

www.after-fp7.eu


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

BIAMFOOD



Controlling Biogenic Amines in Traditional Food Fermentations in Regional Europe

The project focused on three different fermentation processes in four different region of Europe. It aimed to integrate state-of-the-art technologies and implement scientific knowledge in the dairy, wine and cider-making industries so as to improve product quality and at the same time reduce the health risk for the consumer.

The ultimate goal of the BIAMFOOD project was the production of fermented foods with no or controlled amounts of biogenic amines (BA) – components that form a health risk for consumers.

In particular, the project:

- developed strains and techniques to minimise the risk to humans caused by the production of (BA) during food fermenting LAB;
- contributed to food quality in general, and in particular health aspects and the biomedical implications of having BA and BA-producers in the human gastrointestinal tract.

The presence of biogenic amines in foodstuffs is an important problem for food safety because of the role of these compounds in food intolerance and intoxication. BAs do not produce allergic reactions, as physiological reactions to their ingestion are not mediated by the immune system. They are in fact toxic compounds that are sometimes erroneously considered as allergic.

Biogenic amines are introduced into foods at two levels:

- the fermentation process:
- spoilage

The BIAMFOOD project dealt exclusively with the study of BA formation in foods by microorganisms present in the fermentation processes. This is an aspect that has gained much less attention than food spoilage, but will have a much greater impact because it aims at controlling or even eliminating the problem rather than identifying or analysing it. The team developed and optimised ready-to-use techniques for identifying BA-producers and BA-content. These were tailored for use in final food products and during different stages of the fermentation process.

KBBE-2007-2-3-02

Assessment and improvement of existing food and feed technologies

BIAMFOOD

www.biamfood.eu



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,388,957.00

PROJECT N°

211441

DURATION

36 months

PROJECT START DATE

February 2008

LIST OF PARTNERS

1. RIJKSUNIVERSITEIT GRONINGEN (NL)
2. UNIVERSITE VICTOR SEGALEN BORDEAUX II (FR)
3. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
4. UNIVERSITE DE BOURGOGNE (FR)
5. UNIVERSITA DEGLI STUDI DI FOGGIA (IT)
6. INSTITUTO DE BIOLOGIA MOLECULAR Y CELULAR DE ROSARIOIBR (AR)
7. ASSOCIATION POUR LE DEVELOPPEMENT DE LA RECHERCHE APPLIQUEE DANS LES INDUSTRIES AGRICOLES ET ALIMENTAIRES DE NORMANDIE ADRIA NORMANDIE (FR)
8. CHR. HANSEN A/S (DK)
9. INTERPROFESSION DES VINS D'APPELLATION D'ORIGINE CONTROLEES COTES DU RHONE ET VALLEE DU RHONE (FR)
10. ANTONIN RODET SAS (FR)
11. CIDRERIE VIARD SA (FR)
12. SOCIETE D'APPLICATIONS DE RECHERCHES ET DE CONSEILS OENOLOGIQUES SAS (FR)
13. FRANCISCO BADA CB (ES)
14. VAL DE VIRE SASU (FR)
15. CANTINE D'ALFONSO DEL SORDO SRL (IT)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

CAFE



Computer-aided food processes for control engineering

The objective of the CAFE project is to provide new paradigms for the smart control of food processes, on the basis of four typical processes in the areas of bioconversion, separation, preservation and structuring. The novelty of the project lies in combining PAT and sensory devices with models and a simulation environment. The project aims to extract as much information as possible from the process/plant in the form of precise estimations of unmeasured variables defining, in particular, product quality, and how the process changes the physical parameters – which is difficult to know beforehand. It will record and encode physical/deterministic models in a reliable and usable way, and develop control methods to ensure uniform quality and production despite variability in raw materials and/or to respond to sudden changes in demand. Four case studies are addressing wine making (bioconversion), microfiltration of food beverages (separation), freeze-drying of lactic acid bacteria (preservation), and ice cream crystallisation (structuring).

The technology characterising this project lies in combining sensory devices with process analytical technology (PAT), a technology which reduces over-processing and enhances consistency, resulting in viable new processing models.

This approach enables the CAFE project team to make more precise estimations of previously unmeasured variables that define product quality, while also monitoring the changing physical parameters during processing. CAFE will also develop control methods to maintain uniformity in quality and production despite variations in raw material and/or sudden changes in demand.

The project will involve numerous experiments and development of sensors to allow real-time or near-real-time monitoring. A modular, scalable hardware network will integrate several kinds of sensors and components that will maximise product quality satisfy safety requirements and minimise operation costs. Work has progressed considerably; the new processing techniques could reshape the processing industry.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,340,452.00

PROJECT N°

212754

DURATION

57 months

PROJECT START DATE

June 2008

LIST OF PARTNERS

1. UNIVERSITE CATHOLIQUE DE LOUVAIN (BE)
2. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
3. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
4. INSTITUT DES SCIENCES ET INDUSTRIES DU VIVANT ET DE L'ENVIRONNEMENT - AGRO PARIS TECH (FR)
5. TELSTAR TECHNOLOGIES SLU (ES)
6. POVLTAVSKE MLEKARNY AS (CZ)
7. SOCIETA DI PROGETTAZIONE ELETTRONICA E SOFTWARE S.C.R.L. - SPES (IT)
8. PSUTEC SPRL (BE)
9. UNIVERSITA DEGLI STUDI DI ROMA TOR VERGATA (IT)
10. THE UNIVERSITY OF MANCHESTER (UK)
11. C-TECH INNOVATION LIMITED (UK)
12. ALCTRA (FR)
13. X-FLOW BV (NL)
14. BIV SA (BE)
15. CENTRE NATIONAL DU MACHINISME AGRICOLE, DU GENIE RURAL, DES EAUX ET DES FORETS (FR)
16. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
17. WAGENINGEN UNIVERSITEIT (NL)

KBBE-2007-2-3-01

CAFE



Smart control for improved food and feed technologies

www.cafe-project.org


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

CHANCE



Low cost technologies and traditional ingredients for the production of affordable, nutritionally correct foods improving health in population groups at risk of poverty

According to 2007 Eurostat statistics, there is a robust need to better understanding the nutritional existing barriers to healthy nutrition of 79 million EU-27 citizens at-risk-of-poverty. These European sub-clusters and ethnic populations have in common low purchasing power, limited education and the highest risk of diet-related diseases due to sub-optimal nutrition. CHANCE project will i) define an innovative strategy based on a socio- economic study of the composition of the most significant Eu populations at-risk-of-poverty and ii) verify the relative existing nutritional deficiency via a holistic approach ensured by metabonomics investigations correlating the non-healthy diet to real metabolism alterations.

CHANCE intends to adopt a new multidisciplinary approach, leading to nutritional strategies for the prevention of malnutrition in population groups at risk of poverty. CHANCE aims at considering a new health-value-added diet as a whole by developing food products which could act in concert. The synergic collaboration of nutritionists, food chemists, economists and technologists allow a robust strategy to by pass all barriers to healthy nutrition by the lab-scale development of affordable but nutritionally-rich food products, new packaging and portioning. The R&D activities planned in the enlarged European Union will facilitate a proactive collaboration among food research centres and food processing and packaging SMEs that will be further transferred with the generated foreground. During the processing of food products, nutrient content and stability will be assessed, then the whole technology process will undergo the examination of the European Committee for standardization in order to ensure consumers - represented by the European Food Information Council- with a controlled quality. CHANCE nutritional and educational strategies will produce guidelines for European Public Health policy dealing with the prevention of malnutrition in such population groups. The European Food Information Council will ensure that the progress and results from CHANCE will be communicated and disseminated widely.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,807.00

PROJECT N°

266331

DURATION

36 months

PROJECT START DATE

February 2011

LIST OF PARTNERS

1. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
2. VALTION TEKNILLINEN TUTKIMUSKESKUS (FI)
3. UNIVERSITY OF LEEDS (UK)
4. INSTITUTE FOR FOOD TECHNOLOGY OF NOVI SAD (RS)
5. KØBENHAVNS UNIVERSITET (DK)
6. VILNIAUS UNIVERSITETAS (LT)
7. BUDAPESTI MUSZAKI ES GAZDASAGTUDOMANYI EGYETEM (HU)
8. INSTITUTE OF FOOD RESEARCH (UK)
9. CONSORZIO INTERUNIVERSITARIO RISONANZE MAGNETICHE DI METALLOPROTEINE PARAMAGNETICHE (IT)
10. INSTITUT ZA MEDICINSKA ISTRA IVANJA (RS)
11. EUROPEAN FOOD INFORMATION COUNCIL AISBL (BE)
12. COMITE EUROPEEN DE NORMALISATION (BE)
13. VALIO OY (FI)
14. ZDRAVO ORGANIC D.O.O. (RS)
15. PROTEUS GOLD KFT (HU)
16. UZDAROJI AKCINE BENDROVE LIETPAK (LT)
17. STRAND DOO (RS)
18. THE UNIVERSITY OF MANCHESTER (UK)

KBBE-2010-2-3-03

CHANCE

Health-value-added food products for population groups at risk of poverty

www.chancefood.eu

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

COLORSPORE



New Sources of Natural, Gastric Stable, Food Additives, Colourants and Novel Functional Foods

The term functional food is used to describe nutritional components that contribute to consumers' health and well-being. Top of the functional ingredients list are carotenoids, used both as colourants and food additives (vitamins, antioxidants, etc.). One problem with these products is their instability, both on the shelf and during digestion. Recently, gastric-stable bacterial-derived carotenoids have been identified by members of this Colospore consortium leading to second-generation preparations. These carotenoids, arising from marine organisms, are now the subject of a detailed investigation, as are the bacteria that produce them. The longer-term aim is to develop new, natural, functional additives and ingredients that can replace those manufactured chemically.

The initial aim is to gain a clearer understanding of the carotenoids that have been discovered, to characterise their antioxidant activity and bio-availability, and to assess their potential value as food additives or colourants. The project will directly impact the food industry by developing new, natural and novel food additives and ingredients that can replace synthetic ones. It has been widely demonstrated that carotenoids, found in most fruit and vegetables, provide health benefits for the immune systems, the eyes and heart and play a part in the prevention of some cancers. This has been promoted in some countries by slogans such as 'five a day', encouraging consumption from natural sources. However, where diets are restricted by financial or other constraints, supplementation may be beneficial. Carotenoids may also be added to pre-prepared foods, as colourants, or to enable a product to be marketed as having health benefits. Such an approach would appeal to consumers as many people respond to products which are promoted as being natural, rather than synthetic.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,101.00

PROJECT N°

207948

DURATION

42 months

PROJECT START DATE

June 2008

LIST OF PARTNERS

1. ROYAL HOLLOWAY AND BEDFORD NEW COLLEGE. (UK)
2. JOHANN WOLFGANG GOETHE UNIVERSITAET FRANKFURT AM MAIN (DE)
3. UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II. (IT)
4. AQUAPHARM BIODISCOVERY LIMITED (UK)
5. THE UNIVERSITY OF MEDICINE & PHARMACY AT HO CHI MINH CITY (VN)
6. TECHNICAL UNIVERSITY OF ISTANBUL (TR)
7. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (INRA) (FR)
8. NESTEC S.A (CH)

KBBE-2007-2-3-03

(Bio-)technologies for the production of food additives, colorants and flavours

COLORSPORE

www4.inra.fr



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

DREAM



Design and development of REAListic food Models with well-characterised micro- and macro-structure and composition

DREAM – a trans-disciplinary partnership involving two multinationals and nine countries – is developing realistic, physical and mathematical food models for use as standards. They will be exploited across all major food categories to facilitate development of common approaches to risk/benefit assessment and nutritional quality in food research and industry.

The models will enhance knowledge on process-structure-property relationships from the molecular to macroscopic level, and facilitate the creation of generic food matrices with functional and nutritional properties based on tailored microstructure.

The modelling approach has been selected to provide a complete dynamic representation of some food processing that can be extended to other food products.

DREAM intends to improve current knowledge on the relationship between food composition, processing, end-product structures (from molecular to macroscopic scale) and resulting nutritional and safety properties. To validate this approach the team will also investigate the impact of structural changes of the food matrices on nutrient and toxicants bioavailability and the microbial food-borne population.

Models and protocols developed within DREAM will be disseminated by expert partners via existing channels (EFFoST, ETP and national platforms, CIAA and national federations, EFSA, national regulatory bodies) so that they may be used by scientists, SMEs and multinationals to improve nutritional quality and benefit-risk management of the food supply chain. The involvement of the European Technology Platform (ETP) Food for Life will ensure the approach is extended to all foods by 2015.

Training for young members of DREAM will equip them with scientific and other complementary skills necessary for career development within the European Research Area.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,995,786.00

PROJECT N°

222654

DURATION

48 months

PROJECT START DATE

May 2009

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. ASSOCIATION DEPARTEMENTALE POUR LA PROMOTION DE LA RECHERCHE APPLIQUEE AUX INDUSTRIES AGRICOLES ET ALIMENTAIRES (FR)
3. CAMPDEN BRI (UK)
4. CAMPDEN BRI MAGYARORSZAG NONPROFIT KORLATOLT FELELOSSEGU TARSASAG (HU)
5. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS) (FR)
6. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
7. INRA TRANSFERT S.A. (FR)
8. INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES. (ES)
9. INSTITUT TECHNIQUE DU LAIT ET DES PRODUITS LAITIERS (FR)
10. INSTITUTE OF FOOD RESEARCH (UK)
11. KOZPONTI ELEMISZER-TUDOMANYI KUTATOINTEZET (HU)
12. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
13. STICHTING TOP INSTITUUT FOOD AND NUTRITION (NL)
14. SOREDAB SAS (FR)
15. UNITED BISCUITS (UK) LIMITED (UK)
16. UNIVERZA V LJUBLJANI (SI)
17. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
18. WAGENINGEN UNIVERSITEIT (NL)

KBBE-2007-2-3-05

DREAM



Harmonising and integrating research on food technology, safety and nutrition through commonly shared food models

<http://dream.aaeuropae.org/>



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

ECOBIOCAP



Ecoefficient Biodegradable Composite Advanced Packaging

EcoBioCAP will provide the EU food industry with customizable, ecoefficient, biodegradable packaging solutions with direct benefits both for the environment and EU consumers in terms of food quality and safety. This next-generation packaging will be developed using advanced composite structures based on constituents (biopolyesters, fibres, proteins, polyphenolic compounds, bioadhesives and high performance bio-additives) derived from food (oil, dairy, cereal and beer) industry by-products only and by applying innovative processing strategies to enable customisation of the packaging's properties to fit the functional, cost, safety and environmental impact requirements of the targeted fresh perishable foods (fruit and vegetable, cheese and ready to eat meal). Demonstration activities with SMEs and industrial partners will enable the EcoBioCAP technology to be optimised in terms stability, safety, environmental impact and cost-effectiveness before full exploitation. The development of a decision support system for use by the whole packaging chain will make the EcoBioCAP technology is accessible to all stakeholders. Extensive outreach activities will not only disseminate the project results to the scientific community but also ensure that consumers and end-users are informed of the usage conditions and benefits of such bio-degradable packaging and how it should be disposed of.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,780.00

PROJECT N°

265669

DURATION

48 months

PROJECT START DATE

March 2011

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V (DE)
3. INSTITUTO DE BIOLOGIA EXPERIMENTAL E TECNOLOGICA (PT)
4. NANOBIMATTERS SL (ES)
5. UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA (IT)
6. SIK - INSTITUTET FOER LIVSMEDEL OCH BIOTEKNIK AB (SE)
7. UNIVERSIDADE DO MINHO (PT)
8. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
9. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
10. CAMPDEN BRI MAGYARORSZAG NONPROFIT KORLATOLT FELELOSSEGU TARSASAG (HU)
11. FURST-PLAST (FR)
12. NOVAMONT SPA (IT)
13. FROMAGERIE DE HYLZAS (FR)
14. ALTERBIO FRANCE SARL (FR)
15. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
16. INRA TRANSFERT S.A. (FR)

KBBE-2010-2-3-01

Development of biodegradable food packaging

ECOBIOCAP

www.ecobiocap.eu


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

FOOD4ME



Personalised nutrition: An integrated analysis of opportunities and challenges

The present proposal sees the development of business and value creation models as central to the development of personalised nutrition and thus it is intended to engage in a series of interviews with key stakeholders, which will generate a number of scenarios to be considered by these stakeholders. Parallel to that we will run some focus groups with consumers and develop a tool to ascertain consumer attitudes to personalised nutrition in 8 EU countries (1,000 per country) representing a breadth of gastronomic traditions. Within these 8 countries, we will recruit 1,280 subjects and offer 3 levels of personalised nutrition: 1: Personalised dietary advice alone; 2: personalised dietary advice based on biochemical phenotypic data; 3: the latter to include genomic data. These will be compared with a control group, which will be offered non-personalised dietary advice. All of the data on dietary intake and all of the advice will be Internet delivered and will last 6 months. Within each of the 3 levels of personalised nutrition groups, half will receive their feedback at months 0, 3 and 6 while the other half will have continuous feedback on demand with intensive coaching. The overall outcome measurement will be changes in a healthy eating index. The data gathered in this study will feed into the development of algorithms to provide automated feedback for future services delivering personalised advice on food choice. We will bring together an international group of experts to develop best practice in the application of all aspects of nutrigenomic research to personalised nutrition. We will also scope out existing and future technologies, particularly those involving biofeedback, which will help the development of personalised nutrition. Finally we develop position papers on the ethical and legal aspects of personalised nutrition. Permeating all of this work will be a wide-ranging communications programme aimed at all stakeholders of relevance to personalised nutrition.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

8,937,515.00

PROJECT N°

265494

DURATION

48 months

PROJECT START DATE

April 2011

LIST OF PARTNERS

1. UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN (IE)
2. UNIVERSITY OF ULSTER (UK)
3. UNIVERSITEIT MAASTRICHT (NL)
4. UNIVERSITY OF NEWCASTLE UPON TYNE (UK)
5. UNIVERSITETET I OSLO (NO)
6. UNIVERSIDAD DE NAVARRA (ES)
7. GIRACT SARL (CH)
8. LUNDS UNIVERSITET (SE)
9. THE UNIVERSITY OF READING (UK)
10. CREME SOFTWARE LTD (IE)
11. EUROPEAN FOOD INFORMATION COUNCIL AISBL (BE)
12. INSTYTUT ZYWNOSCI I ZYWIENIA (PL)
13. NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO (NL)
14. DSM INNOVATION CENTER B.V. (NL)
15. HAROKOPIO UNIVERSITY (EL)
16. WAGENINGEN UNIVERSITEIT (NL)
17. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
18. PHILIPS ELECTRONICS NEDERLAND B.V. (NL)
19. TECHNISCHE UNIVERSITAET MUENCHEN (DE)
- 20 - VERENIGING EUROPEAN NUTRIGENOMICS ORGANISATION (NL)
20. KELLER AND HECKMAN LLP (US)
21. PHILIPS ELECTRONICS UK LIMITED (UK)
22. VITAS AS (NO)
23. HOGSKOLAN FOR LARANDE OCH KOMMUNIKATION I JONKOPING - HLK SCHOOL OF EDUCATION AND COMMUNICATION (SE)
24. UNIVERSIDADE DO PORTO (PT)

KBBE-2010-2-3-02

Strategies for personalised nutrition

FOOD4ME

www.food4me.org



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

FOODMANUFUTURE



Conceptual Design of a Food Manufacturing Research Infrastructure to boost up innovation in Food Industry

The FoodManufuture project will perform a Conceptual Design Study in order to provide the basis for decision-making for a European Food Manufacturing Research Infrastructure. The Research Infrastructure will aim at boosting competitiveness and innovativeness of the food manufacturing sector through cutting-edge research, dedicating and involving knowledge transfer and motivating education. The project will involve stakeholders from industries, academia and public and private decisionmakers from the food sector and from the production technologies sector in order to meet the needs of SME's and large companies of the sector in a cross disciplinary approach, to provide a clear European dimension, and to create ownership to the content of the final Conceptual Design Report. The consortium is based on, but not restricted to widely distributed networks of public and private stakeholders from the ETPs Food for Life and MANUFUTURE. Joining forces of the food sector and the manufacturing solutions sector representatives, sharing, aligning, combining and defining challenges and solutions will be much more efficient than if done separately, as has been the situation until now. In a bottom up process the stakeholders will create cutting-edge visions for the sector regarding manufacturing technologies, food chain management, sustainability, business models, technology transfer and education. The visions will be analyzed. Available solutions and gaps will be identified. Based on the identified solutions and gaps, models will be elaborated and validated. The final Conceptual Design Report will present the most promising models for the new research infrastructure, the technical and economic figures and propose optional funding solutions. The dissemination program including the involvement of stakeholders at national European level from the two sectors will promote that the final Conceptual Design Report will be awaited and that stakeholders will be motivated for its implementation.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

1,971,283.00

PROJECT N°

289327

DURATION

24 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. AALBORG UNIVERSITET (DK)
2. CAMPDEN BRI MAGYARORSZAG NONPROFIT KORLATOLT FELELOSSEGU TARSASAG (HU)
3. INESC PORTO - INSTITUTO DE ENGENHARIA DE SISTEMAS E COMPUTADORES DO PORTO (PT)
4. SPREAD EUROPEAN SAFETY GEIE (IT)
5. NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO (NL)
6. SIK - INSTITUTET FOER LIVSMEDEL OCH BIOTEKNIK AB (SE)
7. DEUTSCHES INSTITUT FUER LEBENSMITTELTECHNIK (DE)
8. AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE,L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE (IT)
9. TEKNOLOGISK INSTITUT (DK)
10. UNIVERSITEIT GENT (BE)
11. FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V (DE)
12. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
13. CAMPDEN BRI (UK)

KBBE-2011-2-3-02

FOODMANUFUTURE

Food Factory of the Future —
Design Studywww.foodmanufuture.eu

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

FRISBEE



Food Refrigeration Innovations for Safety, consumer Benefit, Environmental impact and Energy optimization along cold chain in Europe

The objective of the FRISBEE project is to provide new tools, concepts and solutions for improving refrigeration technologies along the European food cold chain. At all stages the needs of consumer and European industry will be considered. The project will develop new innovative mathematical modelling tools that combine food quality and safety together with energy, environmental and economic aspects to predict and control food quality and safety in the cold chain.

The FRISBEE partners will develop new and emerging refrigeration technologies, providing energy efficient and sustainable alternatives to current technologies.

There are four major strategic areas of high impact:

- consumer well-being and confidence in the cold chain;
- competitiveness of European industries;
- environmental sustainability;
- contributing to European added value.

The improvement of existing refrigeration technologies will contribute to the European energy objective to reduce the energy consumption by 20% by 2020. It will provide food and refrigeration companies with tools and alternative refrigeration technologies to reduce energy consumption. By reengineering current refrigeration technologies and developing new concepts such as advanced control strategies, energy could be reduced by up to 30%.

The expected final result of the FRISBEE project is to provide new knowledge on food product temperatures in Europe to increase consumer well-being and confidence. Industrial networks can be used to exploit results.

The project will develop innovative databases of current technologies to enable later comparison between new and current technologies. It will develop Quality and Energy/Environment Assessment Tools (QEEAT) as well as new and emerging refrigeration technologies for representative cold chains, selected for applicability to the European food industry.

KBBE-2009-2-3-01

FRISBEE



New solutions for improving refrigeration technologies along the food chain

www.frisbee-project.eu



PROJECT COORDINATOR

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FUNDING SCHEME CP

EC CONTRIBUTION € 5,992,082.00

PROJECT N° 245288

DURATION 48 months

PROJECT START DATE

September 2010

LIST OF PARTNERS

1. INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE (FR)
2. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
3. NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO (NL)
4. LONDON SOUTH BANK UNIVERSITY (UK)
5. PSUTEC SPRL (BE)
6. NATIONAL TECHNICAL UNIVERSITY OF ATHENS (EL)
7. SINTEF ENERGI AS (NO)
8. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
9. COSTAN SPA (IT)
10. NANOBIO MATTERS SL (ES)
11. ARCELIK A.S. (TR)
12. ASSOCIATION DE COORDINATION TECHNIQUE POUR L'INDUSTRIE AGROALIMENTAIRE (FR)
13. VLAAMS CENTRUM VOOR BEWARING VAN TUINBOUWPRODUCTEN (BE)
14. SPREAD EUROPEAN SAFETY GEIE (IT)
15. CRISTOPIA ENERGY SYSTEMS (FR)
16. INTERNATIONAL INSTITUTE OF REFRIGERATION (FR)
17. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
18. SOCIETA DI PROGETTAZIONE ELETTRONICA E SOFTWARE S.C.R.L. - SPES (IT)
19. CAMFRIDGE LTD (UK)
20. SAINT TROFEE (NL)
21. VYSOKA SKOLA CHEMICKO-TECHNOLOGICKA V PRAZE (CZ)
22. SZENT ISTVAN EGYETEM (HU)
23. BONDUELLE SA (FR)
24. FATLAND JAEREN AS (NO)
25. MARFO B.V (NL)
26. ITP NV (BE)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

HEALTHBREAD



HealthBread product innovation based on FP6 HealthGrain results and knowledge

The HealthBread project (HealthBread product innovation based on FP6 HEALTHGRAIN results and knowledge) will, based on an SME and consumer oriented approach, develop whole grain and white breads with further improved nutritional and product quality by applying scientific and technological knowledge from the EU FP6 HEALTHGRAIN project into production and marketing of commercially viable, healthier bread. The HealthBread Manual, with guidelines for choice of raw materials, processing and nutritional statements, in the languages of the participating SMEs bakeries will translate the scientific knowledge into practice and enable them to produce improved bread.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

996,662.00

PROJECT N°

312165

DURATION

24 months

PROJECT START DATE

October 2012

LIST OF PARTNERS

1. NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO (NL)
2. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
3. STICHTING NEDERLANDS BAKKERIJ CENTRUM (NL)
4. OPEN FIELDS SRL (IT)
5. DYADIC NEDERLAND BV (NL)
6. DR. STEPHEN WEBB / RTD SERVICES E U (AT)
7. BAKKERIJ KAMSTRA BV (NL)
8. ULJEE FOOD GROUP BV (NL)
9. WELTER REINHARD (DE)
10. JORG RIPKEN (DE)
11. L. KASSES & CO E U (AT)
12. HEINZ LASSER GMBH (AT)
13. PANIFICIO FUSE' SALVATORE & C. SNC (IT)
14. REGAZZONI PIERANGELO DI CESARE E PIERFRANCO REGAZZONI SNC (IT)
15. GEOVITA FUNCTIONAL INGREDIENTS SRL (IT)
16. KAMPPFMEYER FOOD INNOVATION GMBH (DE)
17. MOLINI TANDOI SPA (IT)

KBBE-2012-2-3-02

HEALTHBREAD



Exploitation of Framework Programme project results in food processing by small and medium-sized enterprises

www.healthbread.eu



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

HIGHTECH EUROPE



European Network for integrating novel technologies for food processing

The main aim of HIGHTECH EUROPE project is to identify, develop and demonstrate potential, cost-efficient, innovations to be used by SMEs and make available high-tech pilot facilities. This approach links innovation sources (bio-, nano- and information and communication technologies), scientific principles and food engineering operations, through researching and developing the necessary means for achieving a durable integration of the R&D and knowledge transfer capacities between academics and industry.

The project expects to substantially increase the innovation rate and competitiveness of the agro-food sector with an impact on food quality, food safety and processing efficiency throughout Europe. The knowledge transfer processes developed will increase the quality and speed of flow and exchange of knowledge and experiences between different parties from university, research centres, associations and the private sector. As such systems, at present, mainly exist on regional or national level the establishment of a Europe-wide networking of these chains would bring added value to all. This impact will be sustained by establishing the European Institute of Food Processing (EU-IFP) that will provide a centre point for collection, promotion and distribution of new ideas covering all sectors of the industry throughout Europe. The EU-IFP should contribute significantly to the future impact of the industry in the global market place.

This project should result in a series of activities and information-based structures aimed at gather and distribution information, technology and research opportunities within the food industry with an emphasis on transfer between the academic and research sector and small and medium sized food companies (SMEs). It will produce a comprehensive database covering process techniques and technology used in the food industry. In addition it will establish a series of information transfer collection and transfer based modules or activities that are identified or distinguished by various titles summarising their function.

The Knowledge Transfer Tube will interlink regional knowledge transfer chains optimizing the transfer of new R&D findings towards the industry and providing Europe-wide suggestions for industrial needs in food processing. It will set up a balanced Agenda of the White Book on high-tech food processing, directed towards policy and regulatory bodies. Dissemination of European findings and training & career development, especially for young scientists will be established in a Network of Excellence, aiming to attract new stakeholders and next generations for a durable network.

KBBE-2007-2-3-06

Network for facilitating the implementation of high-tech processing at industrial scale

HIGHTECH EUROPE

www.hightecheurope.eu


PROJECT COORDINATOR

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FUNDING SCHEME

NoE

EC CONTRIBUTION €

5,865,354.00

PROJECT N°

222824

DURATION

48 months

PROJECT START DATE

May 2009

LIST OF PARTNERS

1. DEUTSCHES INSTITUT FUER LEBENSMITTELTECHNIK (DE)
2. VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. (DE)
3. KOZPONTI ELEMISZER-TUDOMANYI KUTATOINTEZET (HU)
4. UNIVERSITATEA TEHNICA CLUJ-NAPOCA (RO)
5. INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES. (ES)
6. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
7. ZENIT ZENTRUM FUER INNOVATION UND TECHNIK (DE)
8. CENTIV GMBH (DE)
9. NUTRITION SCIENCES NV (BE)
10. TRITECC SRL (RO)
11. BIOZOOM GMBH (DE)
12. COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION (AU)
13. SIK - INSTITUTET FOER LIVSMEDEL OCH BIOTEKNIK AB (SE)
14. VYZKUMNY USTAV POTRAVINARSKY PRAHA (CZ)
15. Q@LI-MEDITERRANEE - SYSTEMES ALIMENTAIRES ET QUALITE DE VIE EN MEDITERRANEE (FR)
16. ASSOCIATION AGROPOLIS (FR)
17. ASOCIATIA ROMANA A CARNII (RO)
18. TECHNOLOGIE A INOVACE (CZ)
19. DEUTSCHE LANDWIRTSCHAFTS-GESELLSCHAFT E.V. (DE)
20. PERVATECH BV (NL)
21. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
22. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

INSIDEFOOD



Integrated sensing and imaging devices for designing, monitoring and controlling microstructure of foods

In terms of science and technology, the main objective of InsideFood is to provide solutions for sensing the microstructure of foods. The project will develop and combine X-ray nano- and microtomography, nuclear magnetic resonance spectroscopy, magnetic resonance imaging, optical coherence tomography, acoustic emission and time- and space-resolved reflectance spectroscopy. The techniques are correlated so as to provide an insight into the effect of microstructure on water and solute status, texture and optical properties, and the internal defects of food. In particular the consortium will consider fresh fruit, processed fruit and cereal products.

The team will develop novel instruments and software for inspecting food microstructure, use them to improve understanding of process-structure-property relationships through advanced mathematical models, and implement them in food processing plants. Food model systems (multiphase gels, foams) and actual foods (cereal products, fresh and dried fruit) will be the focus.

To characterise food microstructure, the team is using the following non-invasive sensors:

- Tomography: magnetic resonance (micro)imaging (MRI), X-ray nano and micro computed tomography (mCT), and high-resolution optical coherence tomography (OCT)
- Spectroscopy: time and space resolved NIR spectroscopy, NMR spectroscopy and multidimensional relaxation and diffusion methods

The InsideFood technologies will also make it possible to develop better quality and new products, and will in turn help to increase the global competitiveness of European food companies. The consortium expects to bring online sensors for microstructure analysis closer to the market and to provide tools for process design and optimisation.

The microstructure will be related to food quality attributes (texture as measured by compression, penetrometry and acoustic emission, water status, absence of internal defects) and safety aspects (absence of foreign materials). The microstructure sensors will be used to improve nutritional aspects of food through the optimisation of sugar- and gluten-free cereal products.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,832,282.00

PROJECT N°

226783

DURATION

48 months

PROJECT START DATE

May 2009

LIST OF PARTNERS

1. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
2. INSTITUTE OF FOOD RESEARCH (UK)
3. RESEARCH CENTER FOR NON DESTRUCTIVE TESTING GMBH (AT)
4. POLITECNICO DI MILANO (IT)
5. SKYSCAN NV. (BE)
6. NESTEC S.A (CH)
7. VISUALIZATION SCIENCES GROUP SAS (FR)
8. SZKOLA GLOWNA GOSPODARSTWA WIEJSKIEGO (PL)
9. VLAAMS CENTRUM VOOR BEWARING VAN TUINBOUWPRODUCTEN (BE)
10. BRUKER BIOSPIN GMBH (DE)
11. CHABER S.A. (PL)
12. UNIVERSIDAD POLITECNICA DE MADRID (ES)

KBBE-2008-2-3-01

Exploring the micro-structure of foods

INSIDEFOOD

www.insidefood.eu


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

ISA-PACK



A Flexible Sustainable Active and Intelligent Packaging Technology Platform Enabling Enhanced Shelf Life, Quality and Safety of Fresh Food Produce

ISA-Pack will develop a flexible, sustainable, active and intelligent technology platform for the packaging of fresh food produce, targeting extended shelf-life and quality, enhanced safety and reduced food and packaging waste. Whilst suitable for a wide range of foods, ISA-Pack will validate the resulting materials and technologies for modified atmospheres and stretch wrap packaging of fresh beef steaks. Key objectives include:

- to develop novel unsaturated polyhydroxybutyrate copolymer materials derived from microbial fermentation of sustainable feedstocks and incorporating low volume cross linkages, demonstrating enhanced properties suitable for high performance gas barrier and stretch film packaging applications;
- to identify synergistic combinations of active food preservation chemistries that may be covalently bound (grafted) within polymeric materials using reactive extrusion techniques; resulting in high efficacy active packaging materials, impacting minimally on food organoleptic properties, ensuring compliance with food ingredient / migration limits; and demonstrating extended food shelf life and quality and improved safety;
- to develop an accurate, tuneable and reliable intelligent indicator system that may be directly printed onto packaging materials (cost efficiency), combining integrated time temperature indicators (microbe growth) with lipid oxidation indicators (freshness), thereby providing assurances of food shelf life, safety and quality;
- to validate the ISA-Pack results within industrial packaging production processes, including performance assessment with regard to active and intelligent functionality and impact on food shelf-life, quality and safety;
- to undertake a full life cycle and economic assessment of the ISA-Pack products, ensuring clear and quantified results addressing specific priority concerns;

Through extension of shelf life the ISA-Pack seeks to reduce retailer supply chain wastage of fresh food produce by 75%.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,946.00

PROJECT N°

289521

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. THE UK MATERIALS TECHNOLOGY RESEARCH INSTITUTE LIMITED (UK)
2. THE UNIVERSITY OF BIRMINGHAM (UK)
3. CAMPDEN BRI (UK)
4. INSTITUTO TECNOLÓGICO DEL EMBALAJE, TRANSPORTE Y LOGÍSTICA (ES)
5. DOMINO PRINTING SCIENCES PLC (UK)
6. BIOPAC (UK) LIMITED (UK)
7. FKUR KUNSTSTOFF GMBH (DE)
8. OMNIFORM SA (BE)
9. WANDA MARIA SZPERLINSKA (PL)
10. ASOCIACION EMPRESARIAL DE INVESTIGACION CENTRO TECNOLÓGICO DEL CALZADYOY DEL PLÁSTICO DE LA REGION DE MURCIA (ES)

KBBE-2011-2-2-03

ISA-PACK

Advanced and flexible technologies for active, intelligent and sustainable food packaging

www.isapack.eu



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

NANODETECT



Development of nanosensors for the detection of quality parameters along the food chain

Working with matter on a scale of less than one micrometer – and usually between 1 and 100 nanometres – nanotechnology is relatively new to the biosciences. It has already been applied to some nutrients to boost bioavailability, but could also be used for the development of innovative and user friendly biosensors, using nanostructures with activated surfaces that facilitate state-of-the-art food quality control systems.

In NANODETECT, nanoreaction technology will be used to develop online and offline monitoring systems (sensors) which combine the potential of sensitive and specific molecular biological processes with the potency of nanotechnology before applying this to liquid process streams. The nanosensors will interact with information technology tools and thus contribute to improved quality control systems, for example within the European dairy industry. Milk was chosen as an example process stream because it is subject to different levels of various contaminations, of which the following were chosen as models:

- Pathogenic microorganisms (*Listeria monocytogenes*)
- Mycotoxins (Aflatoxin M1)
- Drug residues (sulphonamides and aminoglycosides)
- Fraud (high value goat's milk blended with cheaper cow's milk)

The nanosensors can be used for different types of immunoassays, depending. Single modules will be developed for the detection and quantification of specific contaminants. Online systems with software and automated decision support systems for large industries will also be developed, as well as bench-top and/or handheld devices for small companies with flexible production units.

Microfluidic systems are devices that contain fluidic channels or chambers on a small scale of, typically, dimensions in the submillimeter. Due to the ability of the microfluidic devices to deliver and manipulate minute amounts of liquid with high precision, their use has been considerably increased in recent years in the life science, analytical chemistry and biochemistry fields. The NANODETECT biosensor will consist primarily of microstructures, which in combination with an associated immunoassay system will support the development of biological procedures.

KBBE-2007-2-3-04

Nano-devices for quality assurance, food safety and product properties

NANODETECT

www.nanodetect.eu



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,108,788.00

PROJECT N°

211906

DURATION

42 months

PROJECT START DATE

September 2008

LIST OF PARTNERS

1. VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. (DE)
2. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
3. UNIVERSITAET BREMEN (DE)
4. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
5. BIOCLT BV (NL)
6. NORAY BIOINFORMATICS SL (ES)
7. OPTOTEK RAZVOJ IN PROIZVODNJA OPTICNE IN LASERSKE OPREME DOO (SI)
8. FORMATGERIA GRANJA RINYA SL (ES)
9. MEIEREI GENOSSENSCHAFT EG LANGENHORN (DE)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

NOSHAN



Sustainable Production of Functional and Safe Feed from Food Waste

Food processing activities produce in Europe large amounts of by-products and waste. Such waste streams are only partially valorised at different value-added levels (spread on land, animal feed, composting), whereas the main volumes are managed as waste of environmental concern, with relevant negative effects on the overall sustainability of the food processing industry. The main focus of NOSHAN is to investigate the process and technologies needed to use food waste for feed production at low cost, low energy consumption and with maximal valorisation of starting wastes materials. Nutritional value and functionality according to animal needs as well as safety and quality issues will be investigated and address as main leading factors for the feed production using food derived (fruit/plant and dairy). According to this not only wastes will be characterized for their nutritional potential, but suitable technologies to stabilize them and convert them into suitable raw materials for bulk feed will be researched. Two different groups of activities will be thus addressed: From one side, replacement of bulk feed ingredients (constituting up to 90-95% of feed weight) will be studied from the starting waste materials. These bulk materials could cope part of the huge amounts of food waste generated in Europe. From the other side, the valorisation of active ingredients as well as the upgrade of waste into more valuable feed additives will be studied. The later constitute approximately the half of the feed cost.

The main expected result of NOSHAN project is the creation of a broad portfolio of valorised wastes for feed production. In this sense, a selection of wastes according to their potential nutritional properties, quantities produced, seasonality, possibility of stabilisation, safety and regulatory issues, cost and logistics will be performed during the first phase of the project. In addition, a number of wastes will be studied in NOSHAN from the beginning of the project due to their great importance for European Agriculture production or to their nutritional composition. In order to improve nutritional content of feed and be able to fulfil animal needs, waste will be treated alone or mixed with other waste looking for complementation and synergistic effects. The characterisation at molecular level of the different waste streams will allow providing the best technology for the best raw material to obtain the desired nutritional/functional properties.

During NOSHAN a variety of high-advanced technologies for conditioning, stabilising by physico-chemical and biological strategies, extracting high-added value compounds and feed production will be tested, developed and integrated in an innovative low-cost and low energy tailor made procedure for valorising food waste for production of safety and compound functional feed. All these initiatives will be validated in in vitro and in vivo tests to the final animal derived products intended for human consumption. Therefore a whole value chain from starting raw materials to exploitable products and technologies will be covered and monitored with a LCA with a further validation using the novel European Technology Validation platform.

KBBE-2012-2-3-01

Feed production from food waste

NOSHAN

Website not available yet



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,257.00

PROJECT N°

312140

DURATION

42 months

PROJECT START DATE

August 2012

LIST OF PARTNERS

1. ACONDICIONAMIENTO TARRASENSE ASSOCIACION (ES)
2. VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. (BE)
3. UNIVERSITA DEGLI STUDI DI PARMA (IT)
4. NUTRITION SCIENCES NV (BE)
5. IGV INSTITUT FÜR GETREIDEVERARBEITUNG GMBH (DE)
6. EKO DENGGE CEVRESEL EKONOMİK SOSYAL ARASTIRMA DANISMANLIK MUHENDISLIK PROJE INSAAT TICARET VE MUMESSILLIK LIMITED SIRKETI (TR)
7. KNOWLEDGE INNOVATION MARKET S.L. (ES)
8. BAUERNKASEREI WOLTERS GMBH (DE)
9. VERTECH GROUP SARL (FR)
10. EIGEN VERMOGEN VAN HET INSTITUUT VOOR LANDBOUW EN VISSERIJONDERZOEK (BE)
11. PROVALOR BV (NL)
12. AQON WATER SOLUTIONS GMBH (DE)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

PERFORMANCE



Development of Personalised Food using Rapid Manufacturing for the Nutrition of elderly Consumers

The main idea of the PERFORMANCE project is to develop and validate a holistic, personalized food supply chain for frail elderly in nursing homes, ambient assisted living facilities or at home (served by nursing services). The supply "chain" in this case will resemble a loop with the elderly consumers forming the initial link (personal preference and needs) and final link (consumption). As a result PERFORMANCE project, an overall concept will be available which allows the automatic manufacturing and supply of personalized, specially textured food for frail elderly.

To answer these questions, the PERFORMANCE concept will cover the whole supply chain from the food producer to the ready-to eat-meal at consumer's place (both in nursing facilities and at home). Focus will be put on personalized food for people with mastication and swallowing problems (i.e. not only elderly). This group presents 5% of the elderly and has special texture requirements for the food preparation. Elderly in general require careful consideration of various determinants of their nutritional and health status. In contrast to younger people, the impact of nutrition on their well-being and health status is way higher in elderly. The nutritional status of elderly is influenced not only through the aging process, the health status (physiological and physical disabilities) but also through psychological (e.g. the way food is prepared), social-economic factors (available income). Therefore, the PERFORMANCE project will mean a great step forward to improve the Quality of Life of the elderly by offering them a complete new personalised nutritional concept able to increase their independency, health status and social life.

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KBBE-2012-2-3-04

Personalised approaches to food production and distribution

PERFORMANCE

Website not available yet



PROJECT COORDINATOR

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- BIOZOON GMBH (DE)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,997,886.00

PROJECT N°

312092

DURATION

36 months

PROJECT START DATE

not yet signed

LIST OF PARTNERS

1. BIOZOON GMBH (DE)
2. DR. STEPHEN MATTHEW WEBB (AT)
3. DE GROOD INNOVATIONS B.V. (NL)
4. FEMTO ENGINEERING SRL (IT)
5. MARFO B.V. (NL)
6. DENKSTATT GMBH (AT)
7. SANALOGIC GEMEINSCHAFTSVERPFLUGUNGS-LOGISTIK GMBH (AT)
8. ALTEN WOHN- UND PFLEGEHEIM CHRISTKÖNIG (DE)
9. NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO (NL)
10. HOCHSCHULE WEIHENSTEPHAN-TRIESDORF (DE)
11. TEKNOLOGISK INSTITUT (DK)
12. UNIVERSITA DI PISA (IT)
13. XAARJET AB (SE)
14. AMER KARIM (DE)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

PICKNPACK



Flexible robotic systems for automated adaptive packaging of fresh and processed food products

The PickNPack concept offers the food industry the benefits of automation – cost reduction, greater hygiene and more efficient use of resources – combined with the unique ability to adapt to the product and batch size at hand. PickNPack will give the European food industry a vital competitive advantage in the rapidly changing marketplace of the future, where customers demand more quality, more choice and more safety for lower prices. The project will develop three types of modules that can cope with the typical variability of food products and the requirements of the sector regarding hygiene, economics and adaptability. Three modules are working closely together. A sensing module that assesses quality of the individual or small batch products before or after packaging (i), a vision controlled robotic handling module that picks up and separates the product from a harvest bin or transport system and places it in the right position in a package (ii) and an adaptive packaging module that can accommodate various types of packaging with flexibility in terms of package shape, size, product environment, sealing and printing (iii). These modules connect to a multipoint framework for flexible integration into a production line that optimally makes use of the capabilities of the modules. The communication is based on a shared, vendor-independent vocabulary. The combination of modules will be with a user-friendly interface and all modules are equipped with automated cleaning systems to ensure hygiene. All available information in the production chain and the information produced by the sensors in the system is combined, stored and made available to the different modules and both upstream and downstream in the chain. With added intelligence this will lead to maximum performance in quality, reducing change over time, reducing time for reprogramming, adaption to operators, reducing waste of food and packaging material and stock. Human intervention will be reduced to a minimum.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

8,762,481.00

PROJECT N°

311987

DURATION

48 months

PROJECT START DATE

not yet signed

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. TEKNOLOGISK INSTITUT (DK)
3. FUNDACION TECNALIA RESEARCH & INNOVATION (ES)
4. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
5. THE UNIVERSITY OF MANCHESTER (UK)
6. FRAUNHOFER-GESELLSCHAFT ZUR FÖRDERUNG DER ANGEWANDTEN FORSCHUNG E.V. (DE)
7. LACQUEY BV (NL)
8. INSTITUTO TECNOLÓGICO DEL EMBALAJE, TRANSPORTE Y LOGÍSTICA (ES)
9. SPECTROSCAN SARL (FR)
10. MAREL HF (IS)
11. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
12. CAM-TECH AS (DK)
13. XAARJET AB (SE)
14. MARKS AND SPENCER PLC (UK)

KBBE-2012-2-3-03

Automation in food packaging systems

PICKNPACK

Website not available yet



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

PIGSCAN



Automatic grading system for determining lean-fat distribution in pig carcasses.

The pig meat industry is an important contributor to the European economy with a turnover of 66.3 billion € and some 560,000 employees. The sector is suffering significant continuous decline due to the continued pressures of low prices, high feed costs and the consequences of livestock diseases, leading to a gradual loss of world market share, falling to 16% of global exports by 2020, compared to 27% in 2009.

To maintain sector viability is necessary to increase productivity and raise the standards of quality. Partners behind this proposal have identified the need for a technology that accurately analyse pig carcasses, gathering vital information of the lean-fat content in the whole carcass and its primal cuts (ham, loin, belly and shoulder), without which 30-40% of all processed meats do not reach the expected final quality. Pig meat processors will select higher quality meats for higher added-value processes, while lower quality meats will be separated and treated to achieve an acceptable and consistent final quality. PIGSCAN will also ensure fair payment to the pig producer and this will spur them to ensuring the optimal quality of their animals, through better feeding and breeding.

PIGSCAN relies on a solid technology background of the SME proposers arising from a sixth Framework Program Research Project (MEATGRADING n° COOP-CT-2005-01761).

Experts in carcass quality (IRTA and DTI), pig meat processors (VION, LQM) and SME proposers (LENZ and G&M) will develop PIGSCAN system, an automatic, non-contact grading system based on Magnetic Induction and Image Analysis. The commercial price will be of €80,000; an investment recoverable in 6 months of operation for vast majority of slaughterhouses and pig meat processing companies in the EU.

With a time-to-market of 12 months, PIGSCAN represents a real business opportunity for the SMEs proposers LENZ and G&M, who will jointly exploit the results to reach a foreseen 2.5% EU market penetration over a 5-year period.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

989,319.00

PROJECT N°

312135

DURATION

24 months

PROJECT START DATE

March 2013

LIST OF PARTNERS

1. TEKNOLOGISK INSTITUT (DK)
2. LENZ INSTRUMENTS SL (ES)
3. G & M STEEL FABRICATORS LIMITED (IE)
4. INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES. (ES)
5. VION FOOD NEDERLAND BV (NL)

KBBE-2012-2-3-02

PIGSCAN



Exploitation of Framework Programme project results in food processing by small and medium-sized enterprises

Website not available yet



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

PLEASURE



Novel Processing approaches for the development of food products Low in fAt, Salt and sUgar

More than 60% of all reported diseases in modern industrial countries are said to have their origin from malnutrition (low vitamin intake, high caloric food (fat and sugar)). As an important cause of this the high consumption of fat (saturated and trans-fatty acids, salt (sodium) and sugar (mono- and disaccharides) has been identified. With the change of society, the consumer's pattern towards food consumption has and is changing dramatically. While less and less people prepare their meal at home, the increase of TV cooking shows demonstrates the opposite (European paradox). The trend towards processed and convenience food is a challenge for the food industry and those products have to be of high quality and safety at a low price. Fat (saturated and trans-fatty acids), salt and sugar fulfil important functions in food manufacturing as well as in the human metabolism. But meanwhile in the industrial countries their excessive consumption can lead to health problems as stated earlier. Saltiness and sweetness perception are strong markers of the sensorial attributes of food. In the past there have been many attempts made – both by industry and by science to overcome the problem with only limited or no success. All approaches known were either based on nutritional recommendations (e.g. “low carb”) or based on substitutes e.g. sweeteners. The use of replacers to reduce the salt (NaCl), sugar (sucrose, glucose, and fructose) and fat (saturated and trans-fatty acids) content have been very attractive for the food industry as it is an approach which requires only low cost in terms of investments (no equipment needed) and ingredients. However, most of the approaches failed due to lack of consumer acceptance or due to a different taste perception of the products. The PLEASURE project will be the first project addressing this challenge from the processing side.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,983,864.00

PROJECT N°

289536

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. BIOZOON GMBH (DE)
2. TRITECC SRL (RO)
3. EUROPEAN FOOD INFORMATION RESSOURCE AISBL (BE)
4. RLABS LTD (RLABS EREVNES AGORAS ETERIA PERIORISMENIS EFTHINIS) (EL)
5. PROMATEC FOOD VENTURES BV (NL)
6. VMI SA (FR)
7. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
8. PLC INGREDIENTS LIMITED (IE)
9. ALSACIENNE DE PATES MENAGERES SAS (FR)
10. PRODUCTOS NATURALES DE LA VEGA SL (ES)
11. SLEEGERS QUALITY MEAT PRODUCTS BV (NL)
12. DEUTSCHES INSTITUT FUER LEBENSMITTELTECHNIK (DE)
13. HOCHSCHULE WEIHENSTEPHAN-TRIESDORF (DE)
14. ECOLE NATIONALE VETERINAIRE, AGROALIMENTAIRE ET DE L'ALIMENTATION NANTES ATLANTIQUE (FR)
15. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
16. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)

KBBE-2011-2-3-05

Processed foods with a lower salt, fat and sugar content

PLEASURE

www.pleasure-fp7.com



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

PRESERF



Processing Raw materials into Excellent and Sustainable End products while Remaining Fresh

The PRESERF project focuses on the development of novel conservation techniques for a wide range of food applications (frozen, dried and packaged) to extend the shelf life, better maintain the product quality and freshness, and to meet the current need for convenience foods. Three innovative preservation techniques are investigated:

- freeze protection using PEF (pulsed electric fields) and vacuum impregnation;
- mild drying using supercritical CO₂;
- low temperature pasteurisation using supercritical CO₂ (CPT).

Apart from the potential to improve the food quality, each of these techniques also has the means to enhance sustainability through:

- reduced raw material losses;
- lower energy costs during processing;
- reduced need for long distance transport;
- reduced use of chemicals.

During the course of this project, each technology will be developed and assessed according to the quality of the processed foods and the environmental benefits of the processes.

After the development stage, a scaled-up prototype will be designed and constructed for comparative validation studies and demonstrations, particularly intended for SMEs.

The project focuses on the development of novel solid food conservation techniques for a wide range of applications (frozen, dried and packaged) to extend shelf life and to meet the current need for convenient foods. Three innovative preservation techniques, partly interconnected, will be investigated for having the potential to better maintain the product quality and freshness (nutritional value and taste) and the potential for improved sustainability, as the techniques allow for reduction of the raw material losses, lower energy costs and reductions in the use of chemicals.

The aim of this project is to deduce whether the three novel processing technologies can be applied to (all) the various types of solid food products with no or minimal degradation of the product quality (nutritional value, colour, flavour, texture, enzymatic activity and microbial safety). By making use of such novel technologies, it is expected that food chains can become more sustainable, either through reduction of processing cost, better use of food materials and/or reduction in transport costs.

KBBE-2009-2-3-03

Sustainable food and feed processing

PRESERF

www.preserf.eu


PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,547,864.00

PROJECT N°

245280

DURATION

48 months

PROJECT START DATE

April 2010

LIST OF PARTNERS

1. FEYECON DEVELOPMENT & IMPLEMENTATION BV (NL)
2. LUNDS UNIVERSITET (SE)
3. UNIVERSITA DEGLI STUDI DI TRENTO (IT)
4. VNK B.V. (NL)
5. UNIVERSITY OF ZAGREB - FACULTY OF FOOD TECHNOLOGY AND BIOTECHNOLOGY - UZAG PBF (HR)
6. SIK - INSTITUTET FOER LIVSMEDEL OCH BIOTEKNIK AB (SE)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

PROTEINSECT



Enabling the exploitation of Insects as a Sustainable Source of Protein for Animal Feed and Human Nutrition

Food security is a global challenge. Within the overall increased demand for food, and particularly meat production, there is also an urgent need to increase supply of protein from sustainable sources. The principle objective of the international and multidisciplinary PROteINSECT consortium is to facilitate the exploitation of insects as an alternative protein source for animal and human nutrition. Advances have been made in rearing of insects for incorporation in animal feed in countries including China and Mali. The consortium brings together expertise in these countries together with European insect breeders and feed production companies in order to optimise systems and set up pilot scale production facilities in the EU. The project will demonstrate the feasibility of the use of insect-derived proteins in animal feed through trials with fish, poultry and pigs. Quality and safety along the food chain from insect protein itself, to incorporation in feed and ultimately human consumption of insect-protein reared livestock, will be evaluated. The use of waste streams that focus on animal rather than plant material for insect rearing will be examined. To optimise the economic viability of the use of insect proteins, uses for the residual flows from the production system will be determined. Life cycle analyses will enable the design of optimised and sustainable production systems suitable for adoption in both ICPC and European countries. Key to uptake is ensuring that a regulatory framework is in place and this will be encouraged by the preparation of a White Paper following consultation with key stakeholders, experts and consumers. PROteINSECT will build a pro-insect platform in Europe to encourage adoption of sustainable protein production technologies in order to reduce the reliance of the feed industry on plant/fish derived proteins in the short term, and promote the acceptance of insect protein as a direct component of human food in the longer term.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,946,537.00

PROJECT N°

312084

DURATION

39 months

PROJECT START DATE

February 2013

LIST OF PARTNERS

1. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
2. CAB INTERNATIONAL (UK)
3. NUTRITION SCIENCES NV (BE)
4. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
5. MINERVA HEALTH & CARE COMMUNICATIONS LTD (UK)
6. EUTEMA TECHNOLOGY MANAGEMENT GMBH & CO KG (AT)
7. GRANTBAIT LIMITED (UK)
8. GUANGDONG ENTOMOLOGICAL INSTITUTE (CN)
9. HUAZHONG AGRICULTURAL UNIVERSITY (CN)
10. FISH FOR AFRICA - GHANA LIMITED BYGUARANTEE (GH)
11. INSTITUT D'ECONOMIE RURALE (ML)
12. THE UNIVERSITY OF STIRLING (UK)

KBBE-2012-2-3-05

Insects as novel sources of proteins — SICA

PROTEINSECT

Website not available yet



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

SATIN



Satiety Innovation

The SATIN project has been devised to develop food products produced by novel food processing that control satiety through modification of food structure. To achieve this the SATIN project will:

1. Integrate advanced technologies to screen novel food structures through in vitro models to isolate and refine products according to their satiating potential.
2. Develop novel food processing technologies that combine active ingredients and change food structure to produce a range of novel satiety enhancing ingredients.
3. Produce finished foods products that pass through safety analysis, early sensory evaluation and consumer testing.
4. Demonstrate the effects of prototype products on biomarkers of satiety and on nutrient bioavailability using in vivo studies and validating new in vivo approaches.
5. Demonstrate the effects of final foods products on within-meal satiation, post-meal satiety and / or reduced appetite and biomarkers of satiety.
6. Demonstrate the enduring effects of individual food products on satiety and their potential to induce weight loss.
7. Demonstrate the long-term consumer and health benefits of adhering to a diet containing satiety enhancing products.
8. Validate health claim endpoints and commercialise technologies and products.

The SATIN consortium consists of 7 SMEs and 4 commercial partners ensuring that advanced technologies developed to process and screen novel food products are applied to the food industry and improve European economic competitiveness. The safety and efficacy of products developed will be rigorously examined by 7 leading international academic research teams ensuring consumers will have new high quality processed foods to help them achieve a balanced diet.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,992,880.00

PROJECT N°

289800

DURATION

60 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. THE UNIVERSITY OF LIVERPOOL (UK)
2. AXXAM SPA (IT)
3. BIOACTOR BV (NL)
4. CARGILL HAUBOURDIN SAS (FR)
5. COCA-COLA SERVICES S.A. (BE)
6. ASOCIACION EMPRESARIAL DE INVESTIGACION CENTRO TECNOLOGICO NACIONAL AGROALIMENTARIO EXTREMADURA (ES)
7. CENTRO TECNOLOGICO NACIONAL DE LA CONSERVA Y ALIMENTACION (ES)
8. KAROLINSKA INSTITUTET (SE)
9. NIZO FOOD RESEARCH BV (NL)
10. PRODIGEST (BE)
11. DR. STEPHEN MATTHEW WEBB (AT)
12. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
13. KØBENHAVNS UNIVERSITET (DK)
14. UNIVERSITY OF LEEDS (UK)
15. UNIVERSIDAD DE MURCIA (ES)
16. UNIVERSITAT ROVIRA I VIRGILI (ES)
17. NATUREX SPAIN SL (ES)
18. JUVER ALIMENTACION S.L. (ES)

KBBE-2011-2-3-04

SATIN

Satiety control through food structures made by novel processing

www.satin-satiety.eu


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

SO2SAY



Replacement of sulphur dioxide (SO₂) in food keeping the SAME quality and shelf-life of the products

Sulphur dioxide (SO₂) is traditionally used as an antioxidant and preservative in many foodstuffs, such as dried fruits, some fruit juices, snack products, seafood, convenience food (especially containing potatoes) and wine. The main advantage of SO₂ is its ability to prevent enzymatic and non-enzymatic browning in foods, especially fruit and vegetable products. In addition, sulphur dioxide has significant antimicrobial capacity and preserves against microbial spoilage

However, SO₂ and sulphites strongly reduce vitamin B1 uptake. Reduced uptake of this vitamin can lead to several health problems such as chronic headache and memory disturbance. For asthma patients, an intake of less than 10 mg sulphite might be enough to provoke an asthma attack.

Food is the main source for the uptake of sulphur dioxide.

The main objectives of SO2SAY were to reduce the amount of SO₂ in food, develop new agents and processing techniques to replace SO₂ in food products, prevent the enzymatic browning of food, and improve the shelf-life and appearance of food products not containing SO₂. The team also planned to identify alternative natural ingredients with benefits for human health.

An important aspect of the project for food applications is the preservation of the sensory quality and shelf-life of SO₂-free products. Reducing or replacing SO₂ runs the risk of changing the sensory properties of food products, especially colour and taste. Thus, consumers may refuse such food alternatives, even if the alternatives might be healthier. All developments were therefore accompanied by comprehensive sensory studies and consumer tests.

Three approaches could lead to the elimination of SO₂:

- Inactivation of the enzyme polyphenol oxidase to prevent enzymatic browning
- Development of plant extracts containing secondary plant metabolites with a high antioxidative capacity (e.g. plant polyphenols) and antimicrobial activity
- Processing and packaging under an oxygen reduced atmosphere.

KBBE-2008-2-3-02

Alternatives to sulphites in foods

SO2SAY

www.so2say.eu


PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,995,468.00

PROJECT N°

226930

DURATION

40 months

PROJECT START DATE

May 2009

LIST OF PARTNERS

1. VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. (DE)
2. CAMPDEN BRI (UK)
3. WAGENINGEN UNIVERSITEIT (NL)
4. RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITAET BONN (DE)
5. FUNDACION TECNALIA RESEARCH & INNOVATION (ES)
6. MEYER GEMUSEBEARBEITUNG GMBH (DE)
7. BIURKO GORRI SAL (ES)
8. ÉKOLO PRODUCTOS ECOLÓGICOS S.A. (ES)
9. FRUTAROM NETHERLANDS B.V. (NL)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

SUCCIPACK



Development of active, intelligent and sustainable food PACKaging using PolybutyleneSUCCInate

SUCCIPACK aims to support European industry efforts to introduce biobased polybutylene succinate (PBS) as a new material on the food packaging market. Its main advantage is that it has complementary properties compared to other biobased polymers like polylactic acid. PBS is synthesized by polycondensation of succinic acid and butanediol, both identified as key “building blocks” from renewable resources which will be produced on a large scale in the coming years. The aim of SUCCIPACK is to develop sustainable, active, and intelligent food packaging materials based on green PBS that can be flexibly used by packaging and food industries. A first aspect is the optimization of the synthesis and compounding of polymer and copolymer grades for industrial plastic transformation processes to obtain films, trays and pouches. Tailored packaging functionalities will be obtained by flexible in-line surface treatments to control gas barrier properties and to introduce antimicrobial activity. The performance and safety of the novel packaging materials will be assessed for selected food products, representative of different food categories and preservation technologies. Special efforts will be made to explore PBS recycling routes, including chemical recycling by monomerization. An original intelligent labelling function will be added to monitor material degradation and recondensation, during shelf life and recycling. Life cycle assessment (LCA) and life cycle cost analysis (LCC) will be applied to guide the material development and to assess the sustainability of the whole packaging concept. SUCCIPACK will help the European industry, especially SMEs, to strengthen their competitive advantage over the currently fast-growing green PBS developments in the US and Asia. The cooperation between 7 research organizations, 1 large industrial player and 10 SMEs will facilitate an effective uptake of the results by the food and packaging industry.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,521.00

PROJECT N°

289196

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. ASSOCIATION DE COORDINATION TECHNIQUE POUR L'INDUSTRIE AGROALIMENTAIRE (FR)
2. AGRO INDUSTRIE RECHERCHES ET DEVELOPPEMENT (FR)
3. VYSOKA SKOLA CHEMICKO-TECHNOLOGICKA V PRAZE (CZ)
4. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
5. ASOCIACION DE INVESTIGACION DE LA INDUSTRIA AGROALIMENTARIA. (ES)
6. VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. (BE)
7. NATIONAL TECHNICAL UNIVERSITY OF ATHENS (EL)
8. UNIVERSITE LYON 1 CLAUDE BERNARD (FR)
9. EUROQUALITY SARL (FR)
10. NATUREPLAST SAS (FR)
11. 2B CONSULENZA AMBIENTALE DI LEO BREEDVELD (IT)
12. LEYGATECH SAS (FR)
13. VELFOR PLAST SA (FR)
14. TOPCHIM NV (BE)
15. CASEIFICIO MAMBELLI SRL (IT)
16. ORTOREALE SRL (IT)
17. AHUMADOS GIMAR SL (ES)
18. CON.BIO SRL (IT)

KBBE-2011-2-3-03

SUCCIPACK

Advanced and flexible technologies for active, intelligent and sustainable food packaging

www.succipack.eu


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

SUSCLEAN



Sustainable Cleaning and Disinfection in Fresh-Cut Food Industries

SUSCLEAN will contribute to the development and implementation of a new generation of environment-friendly equipment sanitation and food product decontamination technologies ensuring food safety. Susclean is focused on minimally-processed vegetables (MPV) i.e. vegetables physically altered from their original form by slicing and cutting but remaining in a fresh state. We will develop knowledge, methods and tools aimed to; a) design new decontamination approaches for MPV and sanitation strategies for their processing equipment along the supply chain; b) propose guidance and recommendations to renew the best available processing techniques (BAT); c) consider the impact of sanitation and decontamination strategies in line with the Directive on Integrated Pollution Prevention Control (IPPC) 2008/1/CE, and d) improve the hygienic design of equipment for the fresh-cut product industry. The hazard analysis critical control point (HACCP) method will be carried out from post-harvest to processing, taking into account shelf-life after packaging. For each critical point considered, we will study the microbial colonisation patterns, improve the equipment geometry and surface features, and propose innovative and/or optimised current sanitation and decontamination strategies. This will lead to holistic cleaning and disinfecting strategies combining the design of alternative equipment geometries and surfaces (preventive), proposals for innovative cleaning techniques (curative) and application of alternative disinfecting agents (remediation). These achievements will lead to reduction of the use of water and chemicals (chlorine) up to 20-50%, whilst ensuring food safety, sustainable practices and preserving fresh-cut food, European quality and competitiveness. A well-balanced partnership has been built with research institutes and industries (SMEs and one end-user large corporation). 40% of the budget will be devoted to SMEs.

KBBE-2011-2-3-01

Sustainable cleaning and disinfection technologies

SUSCLEAN

<http://susclean.eu/>


PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,992.00

PROJECT N°

287514

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. ASOCIACION DE INVESTIGACION DE LA INDUSTRIA AGROALIMENTARIA. (ES)
3. CAMPDEN BRI MAGYARORSZAG NONPROFIT KORLATOLT FELELOSSEGU TARSASAG (HU)
4. CAMPDEN BRI (UK)
5. FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V (DE)
6. RIJKSINSTITUUT VOOR VOLKSGEZONDHEIDEN MILIEU* NATIONAL INSTITUTE FOR PUBLIC HEALTH AND THE ENVIRONMENTEN (NL)
7. TECHNISCHE UNIVERSITAET BRAUNSCHWEIG (DE)
8. UNIVERSIDADE DO PORTO (PT)
9. INRA TRANSFERT S.A. (FR)
10. ASSOCIATION POUR LE DEVELOPPEMENT DE LA RECHERCHE APPLIQUEE AUX INDUSTRIES AGROALIMENTAIRES DES REGIONS DU NORD (FR)
11. INNOSIEVE DIAGNOSTICS BV (NL)
12. JUERGEN LOEHRKE WASSERAUFBEREITUNG DOSSIER UND ELEKTROANLAGEN GMBH (DE)
13. REALCO (BE)
14. ADRIA DEVELOPPEMENT (ASSOCIATION POUR LE DEVELOPPEMENT, LA RECHERCHE ET L'INNOVATION AGROALIMENTAIRES) (FR)
15. FREEZE AGRO INGENIERIE SARL (FR)
16. TOP BV (NL)
17. AD NUCLEIS (FR)
18. MODERN WATER SERVICES LTD (UK)
19. SINAPTEC (FR) 20 - ASSOCIATION POUR LE DEVELOPPEMENT DE LA RECHERCHE APPLIQUEE DANS LES INDUSTRIES AGRICOLES ET ALIMENTAIRES DE NORMANDIE ADRIA NORMANDIE (FR)
20. IBERIAN SALADS AGRICULTURA SA (PT)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

SUSFOFLEX



Smart and sustainable food packaging utilizing flexible printed intelligence and materials technologies

Scientists and business oriented organizations all have a responsibility in the technology driven sustainable development. The SusFoFlex project has put a rather ambitious objective forward, specifically to deliver a technology which targets the customers with exciting new features and which could possibly yield new production-consumption patterns by using cutting-edge sustainable technologies with smart features.

The development of novel packaging solutions that will have the following characteristics:

- To be sustainable: innovative packaging materials and additives developed from eco-friendly, bio degradable materials obtained from organic agro-food by-products; or traditional packaging materials combined with the former solutions so that their employed amount could be reduced
- To be able to increase/improve the shelf-life of the packaged food: packaging materials with improved barrier and antioxidant properties
- To be able to reduce food losses: thanks to the ability to extend the shelf-life, and/or incorporation of nanomaterials based sensor array (intelligent packaging)

The development of a methodology that could be flexibly applied to different food categories

- Identification of food storage requisites
- Identification of properties of traditional packaging solutions used at present for that food
- Development of sustainable materials with competitive performance
- Development of innovative solutions with improved performances
- Industrial small-scale demonstration of the results

The consortium will investigate different traditional packaging materials (PP/PE) and identify the key areas where improvement in terms of barriers and smart functions can be made by using natural additives, filler and nanomaterials (natural antioxidant extracts, cellulose-based bionanocomposite, nano-silicates, edible nanolaminate coatings), by PLA films, and by developing nanomaterials based sensor array that can gain information on the condition of the product.

KBBE-2011-2-3-03

Advanced and flexible technologies for active, intelligent and sustainable food packaging

SUSFOFLEX

www.susfoflex.com


PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,954,436.00

PROJECT N°

289829

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

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- TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
- SZEGEDI TUDOMANYEGYETEM (HU)
- GEORGIA TECH IRELAND (IE)
- FUNDACION INVESTIGACION Y DESARROLLO EN NANOTECNOLOGIA (ES)
- ICETA - INSTITUTO DE CIÊNCIAS E TECNOLOGIAS AGRÁRIAS E AGRO-ALIMENTARES (PT)
- UNIVERSITA CATTOLICA DEL SACRO CUORE (IT)
- FUNDACION CIDETEC (ES)
- SYSTEM LABEL LIMITED (IE)
- TOMMEN GRAM FOLIE AS (NO)
- CONFIDEX OY (FI)
- FUNDACION ANDALTEC I+D+I (ES)
- KALITE SISTEM LABORATUVARLARI AS (TR)
- ANECOOP SOCIEDAD COOPERATIVA (ES)
- TECCI CIRCUITOS IMPRESOS SL (ES)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

TERIFIQ



Combining Technologies to achieve significant binary Reductions in Sodium, Fat and Sugar content in everyday foods whilst optimising their nutritional Quality

The aim of TeriFiQ is to achieve significant binary (salt and fat or fat and sugar) reductions in the level of sodium, sugar and fat in selected cheese - (hard, semi-hard, soft), meat - (cooked and dry-fermented sausages), cakes (muffins) and ready-made food products (sauces) whilst maintaining and where possible enhancing nutritional and sensorial qualities of these products to ensure full consumer acceptance.

This will be done by fine-tuning current product formulations by engineering the technological parameters of realistic food models specific to each product and by applying state-of-the-art technologies such as cryo-crystallisation, multiple emulsions and multi-layered processes in a manner never done before. In parallel, micro- and macro-structures of the new food matrices will be studied. To ensure the sensorial feasibility of this re-engineering, sensorial analysis and optimisation to ensure consumer acceptability will be carried out in parallel to these technological developments. Moreover, the nutritional value of reformulated foods will be estimated compared to the non reformulated original foods.

As well as the technological aspects, more fundamental studies from selected models developed above will be conducted to improve the understanding of the main mechanisms leading to perception. That includes flavour release and temporal perception in relation with changes in composition of the selected models with in vivo and in vitro approaches with predictive tools, and a cognitive approach will be carried out as a promising lever to compensate salt, sugar and/or fat reduction. The findings will be transferred to the reformulation actions so that they can be introduced into the new food processes. These new product formulations will be validated via extensive consumer testing and demonstration activities with 9 SMEs for 6 European countries to ensure the industrial feasibility and consumer acceptance in different EU cultures and industries.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,994,363.00

PROJECT N°

289397

DURATION

48 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. ASSOCIATION DE COORDINATION TECHNIQUE POUR L'INDUSTRIE AGROALIMENTAIRE (FR)
3. WAGENINGEN UNIVERSITEIT (NL)
4. NOFIMA AS (NO)
5. INSTITUTE OF FOOD RESEARCH (UK)
6. NIZO FOOD RESEARCH BV (NL)
7. HERITAGE 1466 (BE)
8. INRA TRANSFERT S.A. (FR)
9. MILLBA AS (NO)
10. ADRIA DEVELOPPEMENT (ASSOCIATION POUR LE DEVELOPPEMENT, LA RECHERCHE ET L'INNOVATION AGROALIMENTAIRES) (FR)
11. LEIV VIDAR AS (NO)
12. BRASSERIE D ORVAL SA (BE)
13. GROUPE CHAZAL (FR)
14. CENTIV GMBH (DE)
15. FEDERALIMENTARE SERVIZI SRL (IT)
16. SALUMIFICIO DODARO SPA (IT)
17. SATIVA-PRODUCT SRL (RO)

KBBE-2011-2-3-05

Processed foods with a lower salt,
fat and sugar content

TERIFIQ

www.terifiq.eu


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-3 Food Processing

TRACK_FAST



Training Requirements And Careers for Knowledge-based Food Science and Technology in Europe

The food and drink industry is the single largest manufacturing sector in the EU and mainly comprises SMEs and microenterprises (99.1% of European food and drink businesses). But the industry does not rank highly in innovation performance, and is losing out to other players in the global food market.

TRACK_FAST brings together teams from all corners of Europe, and its main objective is to identify the training and career requirements of future European food scientists and technologists and then implement a European strategy to recruit them. TRACK_FAST will do this through identifying and defining skill requirements in the food job market, contributing to the regulation of food science and technology professions in Europe and establishing a framework for continual professional training and career development for food professionals.

The project will also seek to motivate young people to enter and pursue a career in food science and technology in Europe.

TRACK_FAST will provide stakeholders with a forum within which they may discuss their needs; this will be aggregated across sub-sectors. This will result in a list of training needs for the food workforce across Europe, across industry type and across industry sub-sectors. As a result, this project has an evident and clear European dimension.

The project will propose the regulation of careers in food science and technology, which will encourage current food scientists and technologists to attend training and retraining, and will help students to choose their academic path. Common criteria for recognition of careers will facilitate the mobility of food scientists and technologists within and across the EU.

PROJECT COORDINATOR

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FUNDING SCHEME CSA

EC CONTRIBUTION € 999,976.00

PROJECT N° 227220

DURATION 36 months

PROJECT START DATE

September 2009

LIST OF PARTNERS

1. UNIVERSIDADE CATOLICA PORTUGUESA (PT)
2. UNIVERZA V LJUBLJANI (SI)
3. SIK - INSTITUTET FOER LIVSMEDEL OCH BIOTEKNIK AB (SE)
4. FEVIA (BE)
5. ASOCIACION DE INVESTIGACION DE LA INDUSTRIA AGROALIMENTARIA (ES)
6. ESCOLA SUPERIOR AGRARIA DE COIMBRA (PT)
7. INSTITUT DES SCIENCES ET INDUSTRIES DU VIVANT ET DE L'ENVIRONNEMENT - AGRO PARIS TECH (FR)
8. UNIVERSIDAD POLITECNICA DE VALENCIA (ES)
9. GAZIANTEP UNIVERSITESI (TR)
10. EUROPEAN FEDERATION OF FOOD SCIENCE AND TECHNOLOGY (NL)
11. UNIVERSITY OF LEEDS (UK)
12. TECHNISCHE UNIVERSITÄT BERLIN (DE)
13. BUDAPESTI CORVINUS EGYETEM (HU)
14. NATIONAL TECHNICAL UNIVERSITY OF ATHENS (EL)
15. UNIVERSITA DEGLI STUDI DI TERAMO (IT)
16. UNIVERSITATEA DE STIINTE AGRONOMICE SI MEDICINA VETERINARA - BUCURESTI (RO)
17. FEDERACAO DAS INDUSTRIAS PORTUGUESAS AGRO-ALIMENTARES (PT)
18. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
19. UNIVERSITÄT FUER BODENKULTUR WIEN (AT)
20. ISEKI-FOOD ASSOCIATION (AT)
21. KAUNO TECHNOLOGIJOS UNIVERSITETAS (LT)
22. UNIVERSITEIT GENT (BE)
23. AKKREDITIERUNGSAGENTUR FUER STUDIENGAENGE DER INGENIEURWISSENSCHAFTEN, DER INFORMATIK, DER NATURWISSENSCHAFTEN UND DER MATHEMATIK EV (DE)
24. EUROPEAN ASSOCIATION FOR FOOD SAFETY AISBL (BE)
25. KAROLINSKA INSTITUTET (SE)
26. UNILEVER RESEARCH AND DEVELOPMENT VLAARDINGEN BV (NL)
27. INSTITUTO POLITECNICO DE VIANA DE CASTELO (PT)

KBBE-2008-2-3-03

TRACK_FAST

Training and career development
for future food scientists

www.trackfast.eu



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

ACROPOLIS



Aggregate and Cumulative Risk Of Pesticides: an On-Line Integrated Strategy

The overall objective of the project ACROPOLIS is to improve risk assessment strategies in Europe. The specific objectives of the project, which will be addressed in five specific work packages, are:

- improved cumulative exposure assessment and cumulative hazard assessment methodology;
- new models for aggregated exposure assessment addressing different routes of exposure;
- setting up new toxicological testing for identifying possible synergistic effects and developing a strategy for refinement of cumulative assessment groups;
- integrating cumulative and aggregate risk models integrated in a web-based tool, including accessible data for all stakeholders;
- improving the understanding of cumulative risk assessment methodology of different stakeholders.

Cumulative pesticide risk assessment is a multi-stakeholder issue. European consumer groups have raised their concern and the pesticide industry has an urgent need for clear criteria in order to justify the enormous investments in producing new pesticides. The ACROPOLIS project will therefore organise stakeholder conferences to address the complex issue of cumulative and aggregate risk assessment, and the usability and user-friendliness of the models will be tested.

The project will develop a framework for cumulative and aggregate risk assessment of pesticides, which is scientifically sound and accessible for all actors involved in the European risk assessment and risk management. The project brings together the key experts and models in Europe including dietary exposure MCRA, dermal and inhalation exposure ConsExpo, user exposure EUROPOEM and UK POEM, dose-response PROAST, and risk characterisation IPRA. The new integrated model will be tested in case studies with conazoles and pyrethroids, and validated with biomarker and duplicate diet studies. The model software will be tested in different countries to ensure its usability on an international level.

The most significant outcome of ACROPOLIS project shall be the construction of the software for cumulative and aggregate exposure assessment of pesticides.

KBBE-2009-2-4-03

Combined exposure to pesticides

ACROPOLIS

www.acropolis-eu.com


PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,995,548.00

PROJECT N°

245163

DURATION

36 months

PROJECT START DATE

June 2010

LIST OF PARTNERS

1. RIJKSINSTITUUT VOOR VOLKSGEZONDHEID EN MILIEU (NL)
2. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
3. UNIVERSITA DEGLI STUDI DI MILANO (IT)
4. ISTITUTO NAZIONALE DI RICERCA PER GLI ALIMENTI E LA NUTRIZIONE (IT)
5. UNIVERSITEIT UTRECHT (NL)
6. HEALTH AND SAFETY EXECUTIVE (UK)
7. STATNI ZDRAVOTNI USTAV (CZ)
8. EUROPEAN FRESH PRODUCE ASSOCIATION AISBL (BE)
9. LIVSMEDELS VERKET (SE)
10. UNIVERSITEIT GENT (BE)
11. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

BASELINE



Selection and improving of fit-for-purpose sampling procedures for specific foods and risks

Food Safety Objectives (FSOs) and Performance Objectives (POs) are new criteria in food safety based on risk assessment and used to verify a maximum frequency or concentration of microbiological hazards in foods. To be effective such criteria have to be verified using fit-for-purpose sampling schemes. The BASELINE project is currently assessing relevance and possible values of POs and FSOs for a selection of food/ risk combinations and is improving sampling schemes currently available for food authorities and food producers to verify the achievement of suggested POs and FSOs. The new or adapted sampling schemes include traditional and innovative analytical methods are structured to be cost-effective. The team is also developing predictive mathematical models for biological risks and investigating and modeling sources and pathways of chemical contaminants to improve sampling schemes. Sampling schemes developed in the project – along with alternative detection methods – will be fully tested during the project, and all scientific knowledge deriving from the project will be shared with stakeholders.

The large-scale application of sampling schemes developed during BASELINE will increase the probability of detecting chemical and biological risks in foods before their distribution to consumers, decreasing the negative economic impact on both food producers and general society of food recalls and food-borne diseases, respectively.

BASELINE innovations will lead to state-of-the-art sampling schemes, detection and analytical methods and modelling; knowledge of risk factors in individual countries and models for early warning of specified risk factors. These will be built on knowledge of the relationship between a food risk factor and indicator agents, as well as between food risk factors and traceable external parameters. The validated and harmonised sampling techniques will be suitable for application along the food chain, for supporting and advancing food safety risk assessment and enhancing fraud detection. The project will also lead to new knowledge on cost-effective sampling schemes for improving food safety and, as a consequence, consumer confidence.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,154,885.00

PROJECT N°

222738

DURATION

48 months

PROJECT START DATE

August 2009

LIST OF PARTNERS

1. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
2. VETERINAERINSTITUTTET - NATIONAL VETERINARY INSTITUTE (NO)
3. CENTRO NACIONAL DE TECNOLOGIA Y SEGURIDAD ALIMENTARIA (CNTA) - LABORATORIO DEL EBRO (ES)
4. DEUTSCHES KREBSFORSCHUNGSZENTRUM (DE)
5. UNIVERSITE DE BRETAGNE OCCIDENTALE (FR)
6. MAGYAR ÉLELMISZER-BIZTONSÁGI HIVATAL (HU)
7. ISTITUTO SUPERIORE DI SANITA (IT)
8. INSTITUTO TECNOLÓGICO AGRARIO DE CASTILLA Y LEÓN (ES)
9. STIFTUNG TIERAERZTLICHE HOCHSCHULE HANNOVER (DE)
10. UNIVERSITY OF ZAGREB-FACULTY OF VETERINARY MEDICINE (HR)
11. UNIVERSIDAD DE CORDOBA (ES)
12. KØBENHAVNS UNIVERSITET (DK)
13. UNIVERSIDAD DE NAVARRA (ES)
14. AGENCE NATIONALE DE SECURITE SANITAIRE DE L'ALIMENTATION, DE L'ENVIRONNEMENT ET DU TRAVAIL (FR)
15. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
16. TECNOALIMENTI S.C.P.A. (IT)
17. NORDLAKS PRODUKTER AS (NO)
18. CASTELSALUMI SRL (IT)
19. ORTOREALE SRL (IT)
20. UNIVERSIDAD DE LLEIDA (ES)

KBBE-2007-2-4-05

Food sampling strategies for risk analysis

BASELINE

www.baselineeurope.eu


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

BIOHYPO



Confronting the clinical relevance of biocide induced antibiotic resistance

Biocides have been in use for hundreds of years for antiseptics, disinfection and preservation. Despite this widespread and ever increasing use, most bacterial and fungal species remain susceptible to biocides. The dramatic increase and spread of resistance to antibiotics, linked to reports of co- and cross-resistance between antibiotics and biocides, raised speculations on potential hazard of biocide use. The overarching question which BIOHYPO aims to address is whether the use of biocides has contributed to the development and spread of clinically significant antibiotic resistance in human pathogens? The core elements of BIOHYPO are a high throughput screening approach on collections of well characterised microorganisms and an interactive web based data analysis platform. BIOHYPO aims to provide solid data and analysis to direct future issuing of guidelines for safe environmental, medical and industrial use of biocides.

BIOHYPO is designed to test four individual hypotheses, which are:

- use of biocides determines an increase in antibiotic resistance in microorganisms antibiotic resistance due to biocides is of clinical relevance;
- intervention strategies will limit the impact of biocide use on antibiotic resistance and permit safe use;
- biocide use generates reduction in susceptibility to biocides.

The expected impacts of the results obtained in BIOHYPO are multiple and concern a list of subjects, including:

- end users, who will have access to safer food and other products containing biocides;
- the industry, which will have instruments available for risk testing of biocides;
- the environment, which will be less contaminated by biocides with potential risks;
- policy makers, who will be able to define legislative and normative tools for a more appropriate management of biocides.

By using a high throughput screening, bioinformatic analysis and methodological innovation, the final goal of BIOHYPO is to provide a robust dataset to answer to the above hypotheses and to provide guidelines for safe environmental, medical and industrial use of biocides.

KBBE-2008-2-4-02

Biocides and antibiotic resistance

BIOHYPO

<http://kdbio.inesc-id.pt/biohypos/>


PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,705.00

PROJECT N°

227258

DURATION

42 months

PROJECT START DATE

June 2009

LIST OF PARTNERS

1. UNIVERSITA' DEGLI STUDI DI SIENA (IT)
2. QUOTIENT BIORESEARCH (UK)
3. ISTITUTO SUPERIORE DI SANITA (IT)
4. INESC ID - INSTITUTO DE ENGENHARIA DE SISTEMAS E COMPUTADORES, INVESTIGACAO E DESENVOLVIMENTO EM LISBOA (PT)
5. MIDDLE EAST TECHNICAL UNIVERSITY (TR)
6. LYSOFORM DR. HANS ROSEMAN GMBH (DE)
7. BIOLAB ESPAÑOLA DE ANÁLISIS E INVESTIGACIÓN SL (ES)
8. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
9. GAZI UNIVERSITESI (TR)
10. UNIVERSITA DEGLI STUDI DI MILANO (IT)
11. UNIVERSITAET BERN (CH)
12. UNIVERSITA DEGLI STUDI DI FIRENZE (IT)
13. AAT-ADVANCED ANALYTICAL TECHNOLOGIES (IT)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

COLLAB4SAFETY



Towards sustainable global food safety collaboration

Guaranteeing the long term availability of safe foods is a global concern that has initiated a large number of activities, including research, policy development and implementation, legislation and training. Extensive information is generated about food safety, but it is fragmented, and not internationally disseminated. The Collab4Safety consortium will establish a global network on food safety with the aim of developing a sustainable coordination platform for exchange of food safety information about research findings, capacity building and policies and facilitate the control and mitigation of existing and emerging food risks. Tried and tested methods will be used to identify problems and gaps in knowledge, resulting in generation of outputs valuable to research managers and interested stakeholders globally. Establishing a permanent structure will contribute to the development of trust between key players and institutions, which is needed to create an international forum for exchange of information and opinions on matters pertaining to food safety in the food and feed chain.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,990.00

PROJECT N°

311611

DURATION

48 months

PROJECT START DATE

August 2012

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. UNIVERSITY OF NEWCASTLE UPON TYNE (UK)
3. CENTRE DE COOPERATION INTERNATIONALE EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
4. INSTITUTO DE BIOLOGIA EXPERIMENTAL E TECNOLOGICA (PT)
5. SOCIEDADE PORTUGUESA DE INOVACAO - CONSULTADORIA EMPRESARIAL E FOMENTO DA INOVACAO S.A. (PT)
6. INSTITUTION OF THE RUSSIAN ACADEMY OF SCIENCES, A.N. BACH INSTITUTE OF BIOCHEMISTRY OF RAS (RU)
7. THE QUEEN'S UNIVERSITY OF BELFAST (UK)
8. INSTYTUT OGRONICTWA (PL)
9. INSTITUTE OF PLANT PROTECTION CHINESE ACADEMY OF AGRICULTURE SCIENCES (CN)
10. MINISTERIO DA AGRICULTURA, PECUARIA E ABASTECIMENTO (BR)

KBBE-2012-2-4-03

COLLAB4SAFETY

Strengthening cooperation for global food safety research

Website not available yet



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

CONFIDENCE



CONTaminants in Food and Feed: Inexpensive DETection for Control of Exposure.

The presence of potentially hazardous chemicals in food remains a major concern among European consumers. Recent food contamination incidents, e.g. fraudulent addition of toxic chemicals to infant milk powders in China, certainly contribute to fears about the safety of food. Currently, a variety of analytical test methods are used to help ensure the safety of food and feed in Europe both for goods produced in the EU and imported from third countries. Many of these methods are tedious, time consuming, and require sophisticated and expensive instrumentation.

The main objectives of the CONFIDENCE project are:

- the development of new simplified inexpensive detection methods for chemical contaminants from farm to fork in order to assure chemical safety and quality in the European food supply;
- the development of new detection tools for EFSA recognised key and emerging risks;
- an improved exposure assessment based on a better idea about average contaminant levels thanks to increased monitoring data by simplified and cheaper detection tools;
- the contribution to the validation of risk-benefit and predictive hazard behaviour models in accordance with the strategic agenda of the European Technology Platform (ETP) Food for Life;
- the extensive dissemination and training of new detection methods to all relevant stakeholders, including industrial and governmental end-users and students, to advance technology exploitation.

The CONFIDENCE project aims to further improve food safety in Europe through the development of faster and more cost-efficient methods for the detection of a wide range of chemical contaminants in different food and feed commodities. These methods will not only save precious time in ever faster production cycles, but will also permit more food/feed samples to be monitored due to the lower cost per test. In combination with the broadened spectrum of detectable residues and contaminants, the CONFIDENCE project will significantly increase food safety in Europe.

KBBE-2007-2-4-02

Detecting contaminants in the
food and feed chain

CONFIDENCE

www.confidence.eu


PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,800,100.00

PROJECT N°

211326

DURATION

56 months

PROJECT START DATE

May 2008

LIST OF PARTNERS

1. RIKILT – INSTITUTE OF FOOD SAFETY (NL)
2. VYSOKA SKOLA CHEMICKO-TECHNOLOGICKA V PRAZE (CZ)
3. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
4. CHEMISCHES UND VETERINARUNTERSUCHUNGSAMT STUTTGART (DE)
5. COMMISSION OF THE EUROPEAN COMMUNITIES - DIRECTORATE GENERAL JOINT RESEARCH CENTRE - JRC (BE)
6. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
7. DANMARKS TEKNISKE UNIVERSITET (DK)
8. RIJKSINSTITUUT VOOR VOLKSGEZONDHEID EN MILIEU (NL)
9. QUEEN'S UNIVERSITY BELFAST (UK)
10. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
11. CENTRE WALLON DE RECHERCHES AGRONOMIQUES (BE)
12. TAMPEREEN TEKNILLINEN YLIOPISTO (FI)
13. MASTERLAB BV (NL)
14. NESTEC S.A (CH)
15. UNIVERSIDADE DE SANTIAGO DE COMPOSTELA (ES)
16. CENTRE D'ECONOMIE RURALE (BE)
17. UNISENSOR SA (BE)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

ECSAFESEAFOOD



Priority environmental contaminants in seafood: safety assessment, impact and public perception

Seafood has been recognized as a high quality, healthy and safe food item. Yet, some seafood can accumulate environmental contaminants with potential impact on human health. Limited information is available for those without maximum limits set by authorities for seafood, like priority contaminants, biotoxins from harmful algal blooms and marine litter. In order to increase seafood safety to consumers and reduce human health risks, ECsafeSEAFOOD aims to assess safety issues mainly related to non-regulated priority contaminants and evaluate their impact on public health.

ECsafeSEAFOOD addresses these objectives with eight work packages (WPs) targeting priority environmental contaminants, including biotoxins from harmful algal blooms and marine litter. WP1 will elaborate a database with relevant information required for risk assessment gathered from literature and national monitoring programmes. WP2 will monitor contaminants in seafood using an ambitious sampling strategy following the recommendations of the Marine Strategy Framework Directive (Descriptor 9) and assess the effect of seafood processing/cooking on contaminants. In WP3, risk assessment (with data from WP1-2) and mitigation strategies will be implemented to reduce the impact of risky contaminants on human health. WP4 will develop fast screening/detection methods for relevant contaminants tailored to suit stakeholders needs to promote consumers' confidence in seafood. WP5 will carry out the toxicological characterization of contaminated seafood in realistic conditions and will use alternative toxicological methods to provide tools for the risk assessment (WP3). WP6 will assess the links between the level of contaminants in the environment and that in seafood through controlled trials and case-study species, taking into account the effect of climate changes. WP7 details a strategy for education, training with clear and practical dissemination of results. WP8 will ensure efficient project management.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

3,999,874.00

PROJECT N°

311820

DURATION

48 months

PROJECT START DATE

February 2013

LIST OF PARTNERS

1. INSTITUTO PORTUGUES DO MAR E DA ATMOSFERA IP (PT)
2. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
3. UNIVERZA V MARIBORU (SI)
4. UNIVERSITEIT GENT (BE)
5. VETERINAERINSTITUTTET - NORWEGIAN VETERINARY INSTITUTE (NO)
6. INSTITUT CATALÀ DE RECERCA DE L'AIGUA, FUNDACIÓ PRIVADA (ES)
7. DANMARKS TEKNISKE UNIVERSITET (DK)
8. EIGEN VERMOGEN VAN HET INSTITUUT VOOR LANDBOUW EN VISSERIJONDERZOEK (BE)
9. ICETA - INSTITUTO DE CIÊNCIAS E TECNOLOGIAS AGRÁRIAS E AGRO-ALIMENTARES (PT)
10. INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTÀRIES. (ES)
11. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
12. UNIVERSITAT ROVIRA I VIRGILI (ES)
13. AEIFORIA SRL (IT)
14. AQUATT UETP LTD (IE)
15. AGENCE POUR LA RECHERCHE ET LA VALORISATION MARINE (FR)
16. POLYINTELL SAS (FR)
17. HORTIMARE PROJECTS & CONSULTANCY BV (NL)
18. DAN SALMON AS (DK)

KBBE-2012-2-4-01

ECSAFESEAFOOD

Contaminants in seafood and their impact on public health (The Ocean of Tomorrow)

Website not available yet



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

FACET



Flavours, additives and food contact material exposure task

The FACET project will record occurrence levels of specific chemicals in representative regions of EU food supply and create a database of chemical concentrations in foods. The databases will be used to estimate consumer exposure. Exposure modelling will be based on realistic concentration estimates, achieved through migration modelling framework for complex packaging materials that takes into account real conditions of use.

The project will also construct a tiered food intake database covering foods that are relevant to the target food chemicals. The database will be tiered from very comprehensive data to less detailed data to reflect existing variability in access to, and level of detail in, food intake data.

A PC-based, publicly available software programme will be constructed, taking into account the variation of national food consumption data. It will draw on limited data, build on known laws governing food intake, and in particular build on small national surveys and local knowledge to model regional intake of target foods.

FACET's principal impact will be increased protection for the consumer. The project is also expected to foster innovation in the food chain, and provide impetus for a scientific approach that will support international food regulation affairs through a focused, risk-management approach.

The project will produce a database of targeted food chemical concentrations, establish a migration modelling framework for packaging materials into foods, construct of a tiered food intake database for the relevant target food chemicals, develop a PC-based, publicly available software programme populated with data generated by the project, and estimate exposure assessment using a probabilistic model.

KBBE-2007-2-4-01

FACET



Exposure to food additives, flavourings, and migrants coming from the food contacts materials Dietary intake models

www.ucd.ie/facet



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,886,105.00

PROJECT N°

211686

DURATION

48 months

PROJECT START DATE

September 2008

LIST OF PARTNERS

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2. UNIVERSITY OF ULSTER (UK)
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4. CONSEIL EUROPEEN DE L'INDUSTRIE DESPEINTURES DES ENCREES D'IMPRIMERIE ET DES COULEURS D'ART AISBL (BE)
5. TENNANT DAVID ROBIN (UK)
6. AGENCE NATIONALE DE SECURITE SANITAIRE DE L'ALIMENTATION, DE L'ENVIRONNEMENT ET DU TRAVAIL (FR)
7. ISTITUTO NAZIONALE DI RICERCA PER GLI ALIMENTI E LA NUTRIZIONE (IT)
8. TECHNISCHE UNIVERSITAET MUENCHEN (DE)
9. FABES FORSCHUNGS-GMBH FUR ANALYTIKUND BEWERTUNG VON STOFFUBERGANGEN (DE)
10. FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG EV (DE)
11. TERVEYDEN JA HYVINVOINNIN LAITOS (FI)
12. INNVENTIA AB (SE)
13. KOZPONTI ELELMISZER-TUDOMANYI KUTATOINTEZET (HU)
14. CREME SOFTWARE LTD (IE)
15. UNIVERSIDADE DE SANTIAGO DE COMPOSTELA (ES)
16. INSTYTUT ZYWNOSCI I ZYWIENIA IM PROF. DR MED. ALEKSANDRA SZCZYGLA (PL)
17. INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU TEHNOLOGII IZOTOPIECE SI MOLECULARE-INCDTIM CLUJ-NAPOCA (RO)
18. CONFEDERATION DES INDUSTRIES AGRO-ALIMENTAIRES DE L'UE (BE)
19. JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
20. UNIVERSIDADE DO PORTO (PT)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

IFAAM



Integrated Approaches to Food Allergen and Allergy Risk Management

Up to 20 million European citizens suffer from food allergy. However management of both food allergy (by patients and health practitioners) and allergens (by industry) is thwarted by lack of evidence to either prevent food allergy developing or protect adequately those who are already allergic. iFAAM will develop evidence-based approaches and tools for MANAGEMENT of ALLERGENS in FOOD and integrate knowledge derived from their application and new knowledge from intervention studies into FOOD ALLERGY MANAGEMENT plans and dietary advice. The resulting holistic strategies will reduce the burden of food allergies in Europe and beyond, whilst enabling the European food industry to compete in the global market place.

Our approach will build on e-Health concepts to allow full exploitation of complex data obtained from the work in this proposal and previous and ongoing studies, maximising sharing and linkage of data, by developing an informatics platform "Allerg-e-lab". This will enable us to

- (1) Extend and integrate existing cohorts from observation and intervention studies to provide evidence as to how maternal diet and infant feeding practices (including weaning) modulate the patterns and prevalence of allergies across Europe
- (2) Establish risk factors for the development of severe reactions to food and identify associated biomarkers
- (3) Develop a clinically-validated tiered risk assessment and evidence-based risk management approach for food allergens for allergens in the food chain
- (4) Develop clinically-relevant multi-analyte methods of analysis suited to allergen management across the food chain

Stakeholders will be integrated into iFAAM to deliver harmonised integrated approaches, including RISK ASSESSORS AND MANAGERS managing population risk, the FOOD INDUSTRY who manage allergens to ensure consumer safety, HEALTH CARE M68 to provide food allergy management plans and dietary advice and ALLERGIC CONSUMERS to manage individual risk.

KBBE-2012-2-4-04

IFAAM



Towards evidence-based risk management of food allergies

Website not available yet



PROJECT COORDINATOR

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FUNDING SCHEME CP

EC CONTRIBUTION € 8,999,969.00

PROJECT N° 312147

DURATION 48 months

PROJECT START DATE March 2013

LIST OF PARTNERS

1. THE UNIVERSITY OF MANCHESTER (UK)
2. ACADEMISCH MEDISCH CENTRUM BIJ DE UNIVERSITEIT VAN AMSTERDAM (NL)
3. CHARITE - UNIVERSITAETSMEDIZIN BERLIN (DE)
4. UNIVERSITY OF NEBRASKA (US)
5. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
6. REGION HOVEDSTADEN (DK)
7. DEUTSCHER ALLERGIE- UND ASTHMABUND E.V. (DE)
8. UNILEVER U.K. CENTRAL RESOURCES LIMITED (UK)
9. SERVICIO MADRILENO DE SALUD (ES)
10. NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK - TNO (NL)
11. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
12. BUNDESINSTITUT FUR IMPFSTOFFE UND BIOMEDIZINISCHE ARZNEIMITTEL (DE)
13. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
14. INTERNATIONAL LIFE SCIENCES INSTITUTE EUROPEAN BRANCH AISBL (BE)
15. UNIVERSITY OF SOUTHAMPTON (UK)
16. NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS (EL)
17. UNIVERSITAET ZUERICH (CH)
18. UNIVERSYTET MEDYCZNY W LODZI. (PL)
19. UAB PERSPEKTYVOS "ALERGOLOGIJOS KLINIKA ALLERGY CLINIC JSC PERSPECTIVESACP (LT)
20. LANDSPITALI UNIVERSITY HOSPITAL (IS)
21. ODENSE UNIVERSITETSHOSPITAL (DK)
22. SREBRNJAK CHILDREN'S HOSPITAL (HR)
23. DANMARKS TEKNISKE UNIVERSITET (DK)
24. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
25. LEATHERHEAD FOOD INTERNATIONAL LIMITED (UK)
26. EUROFINS CTC GMBH (DE)
27. JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
28. MEDICAL PROGNOSIS INSTITUTE AS (DK)
29. INDOOR BIOTECHNOLOGIES LIMITED (UK)
30. AGENCE NATIONALE DE SECURITE SANITAIRE DE L'ALIMENTATION, DE L'ENVIRONNEMENT ET DU TRAVAIL (FR)
31. HYLOBATES CONSULTING S.R.L. (IT)
32. INTERNATIONALE GESELLSCHAFT FUR LEBENSMITTELSICHERHEIT UND QUALITATSMANAGEMENT (MONIQA ASSOCIATION) (AT)
33. FOODLIFE INTERNATIONAL BILIMSEL DANISMANLIK PROJE YONETIMI EGITIM ARASTIRMA GELISTIRME SANAYI VE TICARETLIMITED SIRKETI (TR)
34. EUROPEAN FOOD INFORMATION RESSOURCE AISBL (BE)
35. KING'S COLLEGE LONDON (UK)
36. NESTEC S.A (CH)
37. THE ANAPHYLAXIS CAMPAIGN (UK)
38. THE IRISH ANAPHYLAXIS CAMPAIGN LIMITED BY GUARANTEE (IE)



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

MARLON



Monitoring of Animals for Feed-related Risks in the Long Term

While there are many European scientific activities for each of the items related to either animal health or the occurrence of GM ingredients in animal feed, the proposed MARLON project will be unique in bringing these widely different fields of scientific expertise together for the cross-disciplinary task of developing an epidemiological model for the case-specific monitoring of potential health impacts of GM animal feeds in livestock.

More specifically, the proposed MARLON project will create an inventory of which epidemiological and monitoring initiatives exist, both within and outside the EU, which could provide useful data for the purpose of monitoring for health impacts of animal feeds, in particular those containing GM ingredients, on livestock animals. It will also collate, in a systematized manner, information on the factors that have to be considered when developing an epidemiological model specifically geared towards this purpose. These factors include 1) the possibility to determine the exposure of animals to GM feed ingredients, 2) the health indicators that have to be considered for particular cases of health impacts identified during pre-market risk assessment of the GMOs, 3) the characteristics of the animal feed and livestock production chains. The project also will develop an epidemiological model specifically geared towards establishing links between measured health effects in livestock and their intake of GM ingredients from animal feed.

As previously stated, there are many activities in the EU focusing on the specific items that together constitute the cross-disciplinary research within the proposed MARLON project, but so far none of them has done this in its totality for the specific purpose of linking health impacts in livestock to GM feed consumption.

The proposed MARLON project is to take stock of these initiatives and assess the applicability of the data collected and/or generated by them for the purpose of case-specific monitoring.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,593.00

PROJECT N°

312031

DURATION

36 months

PROJECT START DATE

August 2012

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. AGROBIOINSTITUTE (BG)
3. FREIE UNIVERSITAET BERLIN (DE)
4. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
5. INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES. (ES)
6. ISTITUTO SUPERIORE DI SANITA (IT)
7. THE ROYAL VETERINARY COLLEGE (UK)
8. SOCIEDADE PORTUGUESA DE INOVACAO - CONSULTADORIA EMPRESARIAL E FOMENTO DA INOVACAO S.A. (PT)
9. UNIVERSITA DEGLI STUDI DI CAMERINO (IT)
10. UNIVERSITAT DE GIRONA (ES)
11. UNIVERSITA DEGLI STUDI DELLA TUSCIA (IT)

KBBE-2012-2-4-05

MARLON

Post-market monitoring of GMOs based on epidemiological studies

Website not available yet



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

NAFISPACK



Natural Antimicrobials For Innovative and Safe Packaging

The main objective of the NAFISPACK project is to develop novel packaging technologies that will avoid/reduce and detect the growth of pathogens and spoilage microorganisms responsible for the loss of perishable foods. It expects to increase the safety and quality of fresh food products over longer periods of time than at present. The foods chosen for investigation include fresh fish, fresh chicken and minimally processed vegetables (MPVs). The selection of these foods reflects their perishable nature. The project aims to develop innovative packing systems that contains natural antimicrobial molecules and also enables the consumer to determine the quality of the food (intelligent packaging). Natural antimicrobials (NAs) occur abundantly in the environment where they have evolved as host defence mechanisms and are generally considered as safe. The term intelligent packaging is used to describe a material incorporating a function that switches on or off in response to changing external or internal conditions or factors. Such packaging would usually include a mechanism that can communicate the status of the product to the customer or end user.

The project is expected to develop novel food packaging technologies as well as novel tools able to monitor the quality of food products over time. It will identify a number of natural antimicrobial substances from target micro-organisms that can be incorporated into chosen packaging materials and select those having the best possibility of being successfully incorporated into the final products, being effective in real life applications. The products will be based on polymeric materials that contain the antimicrobial agent selected or on polymers that possess inherent antimicrobial activities. Once identified the polymer/additive systems will be developed further with design and up-scaling of packaging process systems for the products at pilot plants level. Following testing, these products are expected to be taken further by the industrial partners, on larger pilot plants or through their in-house facilities.

The project also expects to produce integrated systems that will provide a visual display changing over time to indicate that the quality of the packaged food product has been maintained throughout the distribution chain. Studies will include chemical characterization and toxicological profile of intentionally and non-intentionally added substances present in the new packaging materials that might migrate into foodstuffs.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,971,360.00

PROJECT N°

212544

DURATION

38 months

PROJECT START DATE

November 2008

LIST OF PARTNERS

1. INSTITUTO TECNOLÓGICO DEL EMBALAJE, TRANSPORTE Y LOGÍSTICA (ES)
2. UNIVERSITÀ DEGLI STUDI DI MILANO (IT)
3. INNVENTIA AB (SE)
4. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS (ES)
5. SIK - INSTITUTET FOER LIVSMEDEL OCH BIOTEKNIK AB (SE)
6. NOFIMA AS (NO)
7. VALTION TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
8. UNIVERSIDAD DE ZARAGOZA (ES)
9. VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. (DE)
10. DANISCO A/S (DK)
11. METALVUOTO S.P.A. (IT)
12. ARTIBAL S.A. (ES)
13. ENVAFLEX SA (ES)
14. NORDISCHES LACHSKONTOR GMBH (DE)
15. VERDIFRESH SL (ES)
16. TOMMEN GRAM FOLIE AS (NO)
17. NUTRECO SERVICIOS,S.A. (ES)

KBBE-2007-2-4-04

Innovative and safe packaging

NAFISPACK

www.nafispack.com



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

NANOLYSE



Nanoparticles in Food: Analytical methods for detection and characterisation

The NanoLyse project will focus on the development of validated methods and reference materials for the analysis of engineered nano-particles (ENP) in food and beverages. The developed methods will cover all relevant classes of ENP with reported or expected food and food contact material applications, i.e. metal, metal oxide/silicate, surface functionalised and organic encapsulate (colloidal/micelle type) ENP. Priority ENPs have been selected out of each class as model particles to demonstrate the applicability of the developed approaches, including nano-silver, nano-titanium dioxide, nano-silica, an organically surface modified nano-clay and organic nano-encapsulates.

Priority will be given to methods which can be implemented in existing food analysis laboratories. A dual approach will be followed. Rapid imaging and screening methods will allow the distinction between samples which contain ENP and those that do not. These methods will be characterised by minimal sample preparation, cost-efficiency, high throughput and will be achieved by the application of automated smart electron microscopy imaging and biosensor techniques. More sophisticated, hyphenated methods will allow the unambiguous characterisation and quantification of ENP. These will include elaborate sample preparation, separation by flow field fractionation and chromatographic techniques as well as mass spectrometric and electron microscopic characterisation techniques. The developed methods will be validated using the well characterised food matrix reference materials that will be produced within the project. Small-scale interlaboratory method performance studies and the analysis of a few commercially available products claiming or suspect to contain ENP will demonstrate the applicability and soundness of the developed methods.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,945,823.00

PROJECT N°

245162

DURATION

45 months

PROJECT START DATE

January 2010

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. UNIVERSITAET WIEN (AT)
3. DANMARKS TEKNISKE UNIVERSITET (DK)
4. COMMISSION OF THE EUROPEAN COMMUNITIES - DIRECTORATE GENERAL JOINT RESEARCH CENTRE - JRC (BE)
5. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
6. UNIVERSITY OF ALBERTA (CA)
7. CENTRE D'ECONOMIE RURALE (BE)
8. TECHNISCHE UNIVERSITAET WIEN (AT)
9. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
10. VYSOKA SKOLA CHEMICKO-TECHNOLOGICKA V PRAZE (CZ)

KBBE-2009-2-4-01

NANOLYSE

Analytical tools for characterisation of nano-particles in the food matrix

www.nanolyse.eu



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

PARASITE



Parasite risk assesment with integrated tools in EU fish production value chains

Despite many efforts to ensure that only high-quality and safe products are put on the market, fish-borne parasites continue to pose risks to human health, with zoonotic infections and allergic reactions mainly following consumption of raw, lightly cooked, or marinated seafood.

The PARASITE proposal is presented by a multidisciplinary consortium of 12 European and 3 Asian research institutions and 6 European SMEs. It aims to provide new scientific evidence and technological developments to detect, monitor, and mitigate impacts of zoonotic parasites, mainly anisakid nematodes but also trematode metacercariae, occurring in European and imported fishery products. The Project will address the research needs identified by EFSA regarding the risk of seafood-borne parasites. It also will facilitate close cooperation between scientists and end-users to produce new technological solutions and management tools for both European and imported fishery products.

The Work Plan has been organized in 9 work packages, each covering different stages of a risk assessment framework, providing new epidemiological data, monitoring tools, development and implementation of parasite detection devices, technological tools for their mitigation, and dissemination of key results to all the stakeholders and the general public.

Risk assessment of zoonotic parasites will ensure significant progress beyond the state of the art. This will be achieved by improving molecular hazard identification, antigen/allergen characterization, parasite exposure assessment, detection methods and treatments for industrial and other end-users, and an integrated quantitative risk analysis based on powerful statistics and modelling,

The main results will impact by (1) contributing to enhanced seafood safety, with consequent benefits for public health and consumer confidence, (2) strengthening the competitiveness of European seafood, from the net to the plate and (3) improving EU food safety policies.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

3,986,295.00

PROJECT N°

312068

DURATION

36 months

PROJECT START DATE

February 2013

LIST OF PARTNERS

1. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
2. NASJONALT INSTITUTT FOR ENAERINGS-OG SJOMATFORSKNING (NO)
3. UNIVERSITA DEGLI STUDI DELLA TUSCIA (IT)
4. AGENCE NATIONALE DE SECURITE SANITAIRE DE L'ALIMENTATION, DE L'ENVIRONNEMENT ET DU TRAVAIL (FR)
5. CENTRO TECNOLOGICO DEL MAR - FUNDACION CETMAR (ES)
6. SERVICIO MADRILENO DE SALUD (ES)
7. HAVSTOVAN (FO)
8. ISTITUTO SUPERIORE DI SANITA (IT)
9. TRUONG DAI HOC NHA TRANG (VN)
10. ZHEJIANG OCEAN UNIVERSITY (CN)
11. CENTRAL LUZON STATE UNIVERSITY (PH)
12. MAX RUBNER INSTITUT BUNDESFORSCHUNGSINSTITUT FUR ERNAHRUNG UND LEBENSMITTEL (DE)
13. KØBENHAVNS UNIVERSITET (DK)
14. INSTITUTE OF OCEANOGRAPHY AND FISHERIES (HR)
15. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
16. LARPRO ENGINEERING SL (ES)
17. COOPERATIVA DE ARMADORES DE PESCA DEL PUERTO DE VIGO S.C.G. (ES)
18. COMERCIAL HOSPITALARIA GRUPO 3 SL (ES)
19. TECHNET GMBH GRUNDIG + PARTNER (DE)
20. HERMES AS (NO)
21. NEDERLOF'S VISHANDEL BV (NL)

KBBE-2012-2-4-02

Food safety and quality issues related to parasites in seafood

PARASITE

Website not available yet



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

PERFOOD



PERFluorinated Organics in Our Diet

Anthropogenic perfluorinated compounds (PFCs) have recently gained socio-economic and scientific interest. PFCs constitute a newly emanating group of environmental contaminants, with physico-chemical as well as toxicological properties different from those of other halogenated compounds. PFCs are generally persistent in the environment, and can be found over a broad concentration range and within most parts of the aquatic and terrestrial ecosystems. Food, produced with natural ingredients, and possibly beverages, including drinking water, are likely to be contaminated with PFCs, giving rise to human exposure. Whether or not industrial food processing and packaging may give rise to additional contamination of food and beverages is currently not understood. Whatever the sources, PFCs have indeed been found to be present at a global scale in blood of the general population.

PERFOOD brings together the institutes most renowned in Europe and the Globe for their chemical analytical work on PFCs with experts in food consumption and drinking water quality as well as food processing and packaging.

The aims of the present project are to develop robust and reliable analytical tools including reference materials for the determination of PFCs in food items, and to use these to (i) qualify and quantify PFCs in our diet, employing a large European sampling campaign; (ii) understand how PFCs are transferred from the environment into dietary items, and (iii) quantify the possible contribution of food/beverage contact materials and food and water processing to the overall PFC levels in our diet. The newly gained knowledge will enable us to evaluate the possible routes, including their relative importance, of human exposure to PFCs via our diet, to assess the role of the technosphere in the contamination of our food, and to identify ways to reduce the PFC contamination of dietary articles.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,432.00

PROJECT N°

227525

DURATION

40 months

PROJECT START DATE

August 2009

LIST OF PARTNERS

1. UNIVERSITEIT VAN AMSTERDAM (NL)
2. STOCKHOLMS UNIVERSITET (SE)
3. FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V. (DE)
4. NORSK INSTITUTT FOR LUFTFORSKNING (NO)
5. ISTITUTO SUPERIORE DI SANITA (IT)
6. VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG (NL)
7. VYSOKA SKOLA CHEMICKO-TECHNOLOGICKA V PRAZE (CZ)
8. UNIVERSITEIT ANTWERPEN (BE)
9. BUNDESINSTITUT FUR RISIKOBEWERTUNG (DE)
10. KWR WATER B.V. (NL)

KBBE-2008-2-4-01

Perfluorinated organic compounds in food

PERFOOD

www.perfood.eu



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

PLANTLIBRA



PLANT food supplements: Levels of Intake, Benefit and Risk Assessment

Plant food supplements, or botanicals, have high acceptance by European consumers. Potentially, they can deliver significant health benefits, safely, and at relatively low costs. New regulations and EFSA guidance are also now in. However, concerns about safety, quality and efficacy of these products remain, and bottle-necks in risk and benefit assessments need to be solved.

PlantLIBRA (PLANT food supplements: Levels of Intake, Benefit and Risk Assessment) aims to foster the safe use of food supplements containing plants or herbal extracts, by increasing science-based decision-making by regulators and food chain operators. To make informed decisions, competent authorities and food businesses need more quality-assured and accessible information and better tools (e.g., metadatabanks). PlantLIBRA is structured to develop, validate and disseminate data and methodologies for risk and benefit assessment and implement sustainable international cooperation. International cooperation, on-spot and in-language capacity building are necessary to ensure the quality of the plants imported in the EU.

PlantLibra spans 4 continents and 23 partners, comprising leading academics, Small- and Medium-Sized Enterprises, industry and non-profit organizations. Through its partners it exploits the databases and methodologies of two Network of Excellences, EuroFIR and Moniqa.

Plantlibra will also fill the gap in intake data by conducting harmonized field surveys in the regions of the EU and apply consumer sciences to botanicals. Existing composition and safety data will be collated into a meta-databank and new analytical data and methods will be generated. The overarching aim is to integrate diverse scientific expertise into a single "science of botanicals".

PlantLIBRA works closely with EFSA since several PlantLIBRA partners or experts are involved in the relevant EFSA Working Groups, and also plans shoulder-to-shoulder cooperation with competent authorities and stakeholders.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,985,934.00

PROJECT N°

245199

DURATION

48 months

PROJECT START DATE

June 2010

LIST OF PARTNERS

1. UNIVERSITA DEGLI STUDI DI MILANO (IT)
2. BIODETECTION SYSTEMS B.V. (NL)
3. COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (ZA)
4. EUROPEAN ADVISORY SERVICES (BE)
5. EUROPEAN RESPONSIBLE NUTRITION ALLIANCE (BE)
6. FINNISH FOOD SAFETY AUTHORITY EVIRA (FI)
7. HYLOBATES CONSULTING S.R.L. (IT)
8. FUNDACIO PRIVADA PER A LA INVESTIGACIO NUTRICIONAL (ES)
9. INTERNATIONALE GESELLSCHAFT FUR GETREIDEWISSENSCHAFT UND -TECHNOLOGIE (AT)
10. INSTITUTE OF FOOD RESEARCH (UK)
11. INSTITUTE OF MEDICINAL PLANT DEVELOPMENT, CHINESE ACADEMY OF MEDICAL SCIENCES (CN)
12. ISTITUTO SUPERIORE DI SANITA (IT)
13. PHYTO LAB GMBH & CO KG (DE)
14. SOCIETA ITALIANA DELLE SCIENZE E DELLE TECNICHE ERBORISTICHE (IT)
15. SCHWEIZERISCHES TOXIKOLOGISCHES INFORMATIONSZENTRUM (CH)
16. TERVEYDEN JA HYVINVOINNIN LAITOS (FI)
17. UNIVERSIDAD DE BUENOS AIRES (AR)
18. UNIVERSITY OF SURREY (UK)
19. UNIVERSITY OF LEEDS (UK)
20. UNIVERSIDADE DE SAO PAULO (BR)
21. UNIVERSITATEA TRANSILVANIA DIN BRASOV (RO)
22. VETERINAERMEDIZINISCHE UNIVERSITÄT WIEN (AT)
23. WAGENINGEN UNIVERSITEIT (NL)
24. EUROPEAN FOOD INFORMATION RESSOURCE AISBL (BE)
25. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
26. EUROPEAN BOTANICAL FORUM AISBL (BE)

KBBE-2009-2-4-02

Risk-benefit assessment of food supplements – SICA

PLANTLIBRA

www.plantlibra.eu


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

PRIORITY



Protecting the food chain from prions: shaping European priorities through basic and applied research

Twenty years ago, Bovine Spongiform Encephalopathy (BSE) caused a devastating health and food crisis throughout Europe. Classical BSE is now under control as a result of the meat and bone meal ban. However, tonsil analyses suggest that there may be an alarmingly high number of asymptomatic PrPSc positive cases. Transmission through blood transfusion is another significant concern, as are recent atypical cases of BSE.

Only a profound understanding of the molecular biology of prions (unprecedented infectious pathogens that cause a group of invariably fatal neurodegenerative diseases) will enable scientists to control them. But to understand why BSE-contaminated food causes vCJD, they must first understand how prions get into food, what happens when they are in the gut, how they reach the brain, and how they initiate the chain reaction rapidly leading to death. The PRIORITY consortium has formulated seven key questions:

1. How can we avoid a new BSE outbreak, as well as other prion infections in livestock?
2. Why did decontamination of meat and bone meal fail; is there an effective way to decontaminate feedstuffs, soil etc?
3. What is the risk of humans being infected with each of the different prion strains known thus far?
4. Which are the best strategies to implement feasible prion eradication programmes?
5. How can we develop a pre-clinical prion blood test?
6. How can we identify human cases with potential secondary transmission?
7. What is the origin of atypical human CJD cases?

PRIORITY will search for decisive data on the structure of PrPSc, the molecular basis of strains and species barriers, the mechanism of prion conversion, the cell biology of PrPSc, the function of PrPC, and the mechanisms of PrP-associated pathology. This information will be translated into a more accurate estimation of current exposure risk to humans from TSE, as well as an evaluation of current intervention strategies. The team will also develop improved decontamination techniques and prion tests.

KBBE-2007-2-4-06

Protecting animal and human health from prions in food, feed and the environment

PRIORITY

www.prion-priority.eu/web


PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,499.00

PROJECT N°

222887

DURATION

60 months

PROJECT START DATE

October 2009

LIST OF PARTNERS

1. UNIVERSIDADE DE SANTIAGO DE COMPOSTELA (ES)
2. UNIVERSITAET ZUERICH (CH)
3. HEINRICH-HEINE-UNIVERSITAET DUESSELDORF (DE)
4. INSTITUT PASTEUR (FR)
5. STICHTING HET NEDERLANDS KANKER INSTITUUT (NL)
6. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
7. FRIEDRICH LOEFFLER INSTITUT - BUNDESFORSCHUNGSINSTITUT FUER TIERGESUNDHEIT (DE)
8. THE HEBREW UNIVERSITY OF JERUSALEM. (IL)
9. KAROLINSKA INSTITUTET (SE)
10. THE UNIVERSITY OF EDINBURGH (UK)
11. UNIVERSITAETSMEDIZIN GOETTINGEN - GEORG-AUGUST-UNIVERSITAET GOETTINGEN - STIFTUNG OEFFENTLICHEN RECHTS (DE)
12. UNIVERSITAT DE BARCELONA (ES)
13. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
14. SMP GMBH - PRUEFEN VALIDIEREN FORSCHEN (DE)
15. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
16. VETERINAERINSTITUTET - NATIONAL VETERINARY INSTITUTE (NO)
17. SLOVENSKA ZDRAVOTNICKA UNIVERZITA V BRATISLAVE (SK)
18. SCUOLA INTERNAZIONALE SUPERIORE DI STUDI AVANZATI (IT)
19. UNIVERSITEIT MAASTRICHT (NL)
20. PRIONICS AG (CH)
21. UNIVERSITAET HOHENHEIM (DE)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

PROMETHEUS



PROcess contaminants: Mitigation and Elimination Techniques for High food quality and their Evaluation Using Sensors & Simulation

The PROMETHEUS project will help the European food industry reduce consumer exposure to food processing contaminants without affecting food quality or microbiological safety. PROMETHEUS builds on the previous EU projects HEATOX and ICARE. Its aims are (1) to understand the dynamics of formation of major Processing Contaminants, (2) to provide on-line real time methods to monitor reactions leading to contaminant formation, (3) to develop new processing technologies to mitigate contaminants but maintain the safety and sensory properties of the food and (4) to demonstrate scaling the new technologies to the industry level. Foods (infant formulas, biscuits, canned baby foods, and canned fish and vegetables) have been chosen for their nutritional importance. Processing contaminants (acrylamide, 3-monochloropropanediol esters, glycidol esters, furan, hydroxymethylfurfural and carboxymethyllysine) have been chosen for their toxicity, consumer exposure and relevance to the foods. PROMETHEUS will use a novel holistic approach of continuous real-time on-line monitoring of contaminant formation during food processing. Ambient mass spectrometry, fluorescence spectroscopy and image analysis will measure the contaminants simultaneously and allow modelling of the reactions that form contaminants and affect food quality. Innovative processing technologies will be used: vacuum baking, high hydrostatic pressure, ohmic heating, and ingredient microencapsulation. Improvement strategies will be demonstrated at industry level. The PROMETHEUS consortium has 8 research organisations and 6 industrial partners (including 4 SMEs, 1 large company and the European Confederation of Agro Food industries). The project outcome will help to protect the consumer. It will improve the competitiveness of the food industry by anticipating future contamination regulations, and help it to innovate by implementing new technologies in order to better control the safety and overall quality of their products.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,573.00

PROJECT N°

265558

DURATION

36 months

PROJECT START DATE

May 2011

LIST OF PARTNERS

1. ASSOCIATION DE COORDINATION TECHNIQUE POUR L'INDUSTRIE AGROALIMENTAIRE (FR)
2. SPECTRALYS INNOVATION (FR)
3. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
4. UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II. (IT)
5. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
6. HACETTEPE UNIVERSITESI (TR)
7. TECHNISCHE UNIVERSITAT BERLIN (DE)
8. VYSOKA SKOLA CHEMICKO-TECHNOLOGICKA V PRAZE (CZ)
9. CONFEDERATION DES INDUSTRIES AGRO-ALIMENTAIRES DE L'UE (BE)
10. EUROQUALITY SARL (FR)
11. ETI MAKINE SANAYI VE TICARET AS (TR)
12. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
13. SIRO AGUILAR, S.L. (ES)
14. CAPSULAE (FR)

KBBE-2010-2-4-02

Identification of the effect of processing on food contaminants

PROMETHEUS

<http://processing-contaminants-prometheus.com/index.php>


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

PROMISE



Protection of consumers by microbial risk mitigation through combating segregation of expertise

The general objectives of PROMISE are:

PROMISE strives for multidimensional networking thus fostering integration

The primary strategic objective of PROMISE is to improve and increase the integration, collaboration and knowledge transfer between the new member states, old member states (EU15) and candidate countries through a collaborative workplan of exchange of expertise and regional training and dissemination actions, to tackle common food safety threats.

PROMISE strives for sustainability through involvement of risk communicators

A further strategic objective is to integrate stakeholders like public health authorities and national food safety authorities from the old and new member countries in order to ensure the exploitation of research results into standardisation and harmonisation efforts.

PROMISE will enhance the knowledge on pathogen transmission

While legal imports are well monitored for contamination and alerts are registered through the Rapid Alert System for Food and Feed (RASFF; http://www.efet.gr/docs/rasff/report2008_en.pdf)

notification systems, "gates" into the EU-27 could exist where food supply chains are not controlled. These uncontrolled imports present the risk that new strains of traditional pathogens will be transferred from third countries into the European Union. Analysing, assessing and interpreting this risk of introducing new strains of pathogens is one of the main objectives of PROMISE.

KBBE-2010-2-4-01

Improving integration in food safety research

PROMISE

<http://promisenet.wordpress.com/>


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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,756.00

PROJECT N°

265877

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. VETERINAERMEDIZINISCHE UNIVERSITAET WIEN (AT)
2. BUNDESINSTITUT FUER RISIKOBEWERTUNG (DE)
3. INSTITUTE OF FOOD RESEARCH (UK)
4. AGRICULTURAL UNIVERSITY OF ATHENS (EL)
5. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
6. UNIVERSIDAD DE BURGOS (ES)
7. VYZKUMNY USTAV VETERINARNIHO LEKARSTVI (CZ)
8. UNIVERZA V LJUBLJANI (SI)
9. MAGYAR TUDOMANYOS AKADEMIA AGRARTUDOMANYI KUTATOKOZPONT (HU)
10. VYSKUMNY USTAV POTRAVINARSKY (SK)
11. UNIVERSITATEA DUNAREA DE JOS DIN GALATI (RO)
12. KALITE SISTEM LABORATUVARLARI AS (TR)
13. DI ANDREAS MOSER RTD SERVICES -RTDS (AT)
14. UNIVERSITY OF ZAGREB-FACULTY OF VETERINARY MEDICINE (HR)
15. OSTERREICHISCHE AGENTUR FUR GESUNDHEIT UND ERNAHRUNGSSICHERHEIT GMBH (AT)
16. FOOD SAFETY AUTHORITY OF IRELAND (IE)
17. ENIEOS FOREAS ELEGHOU TROFUNON (EL)
18. GIDA GUVENLIGI DERNEGI (TR)
19. AUTORITATEA NATIONALA SANITARA VETERINARA SI PENTRU SIGURANTA ALIMENTELOR (RO)
20. URAD VEREJNEHO ZDRAVOTNICTVA SLOVENSKEJ REPUBLIKY (SK)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

QSAFFE



Quality and Safety of Feeds and Food for Europe

The rearing of healthy European livestock is highly dependent on the provision of high quality and safe feeds. This in turn has a major impact on the safety of the entire animal based food chain. The concept of Q-SAFFE is to deliver better, faster and economically viable means of ensuring the quality and safety of animal feeds in Europe. The Q-SAFFE consortium is composed of academics and government scientists with substantial experience in animal feed research along with industrial companies, large and small, dedicated to supplying and producing higher quality and safer animal feeds. Together, their vision is an integrated approach to the reduction and management of chemical and microbiological contamination in animal feeds. This research project will provide better ways of preventing contamination and fraud, identifying and assessing new risks and providing scientific evidence of the risks of transfer of microbiological and chemical contaminants from feed to food.

Strategies for early quality and safety assurance in the feed chain will be developed using existing testing methods and emerging technologies such as fingerprinting to deliver a comprehensive analytical strategy for monitoring at ports, feedmills and labs. The traceability and authenticity of feed materials will be improved by determining which tests, conventional and fingerprinting, will be most useful in tracing origins of feed materials including those derived from biofuel co-products. Emerging chemical and microbiological risks will be identified from new types and sources of animal feed materials and new production processes. These will direct the development of rapid, low cost screening tests to enable high quality and safety standards to be met. The transfer of chemical contaminants such as melamine and dioxins and micro-organisms (*Salmonella* spp, *Listeria monocytogenes*) from feed to food will be studied using pharmacokinetic models and animal studies to provide risk assessments for regulators.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,988,466.00

PROJECT N°

265702

DURATION

42 months

PROJECT START DATE

March 2011

LIST OF PARTNERS

1. QUEEN'S UNIVERSITY BELFAST (UK)
2. BUNDESINSTITUT FUER RISIKOBEWERTUNG (DE)
3. VYSOKA SKOLA CHEMICKO-TECHNOLOGICKA V PRAZE (CZ)
4. CENTRE WALLON DE RECHERCHES AGRONOMIQUES (BE)
5. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
6. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
7. JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
8. CHINA AGRICULTURAL UNIVERSITY (CN)
9. PROVIMI HOLDING BV (NL)
10. RIJKSINSTITUUT VOOR VOLKSGEZONDHEIDEN MILIEU* NATIONAL INSTITUTE FOR PUBLIC HEALTH AND THE ENVIRONMENT (NL)
11. JOHN THOMPSON & SONS LTD (UK)

KBBE-2010-2-4-03

Quality and safety aspects of feed

QSAFFE

www.qsaffe.eu

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

QUAFETY



Comprehensive approach to enhance quality and safety of ready to eat fresh products

This proposal aims to improve safety and quality of RTE fresh produce throughout the whole chain by developing new predictive and probabilistic models and decision-making tools, by exploring rapid and non-destructive methods for quality evaluation and prediction, and by experimenting novel technologies, in order to quantify and manage spoilage and pathogen microorganisms, minimize risks to consumers, and preserve quality. Objectives of the proposal will be reached through the realization of 9 WPs. WP1 will develop diagnostic kits to predict quality and safety of raw material and final product. WP2 will develop process control aids based on non-destructive and rapid evaluation. WP3 will develop decision support tools in very critical points of the processing chain. WP4 will investigate innovative processes to improve quality and safety of fresh-cut products. Technological innovations will go through implementation and demonstration in WPs 5 and through an economic evaluation approach in WP6. Results will represent valuable information in order to re-visit and improve good practice procedures or, to define a more efficient management system for quality and safety (in WP7). Finally, results will be disseminated to potential users in WP8, while WP9 will consist of the management of the consortium. The participants are 14, 7 countries including 6 SMEs, 2 public research Institutes and 6 Universities, assorted in terms of scientific and technological expertise. The presence of SMEs will ensure the exploitation of the results directly and indirectly. Potential impacts of the results of this project may be related to the increase of scientific evidences about safety and quality, expansion of consumer awareness, increase of the innovation capacity of the industry strengthening its competitiveness, provision of scientific evidence to the EC and other health authorities (also for campaigns for healthy nutrition), and a reference point to mass media.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,932,684.00

PROJECT N°

289719

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. UNIVERSITA DEGLI STUDI DI FOGGIA (IT)
2. UNIVERSITA DEGLI STUDI DI MILANO (IT)
3. AGRICULTURAL UNIVERSITY OF ATHENS (EL)
4. UNIVERSIDADE CATOLICA PORTUGUESA (PT)
5. THE AGRICULTURAL RESEARCH ORGANISATION OF ISRAEL - THE VOLCANI CENTRE (IL)
6. CARDIFF UNIVERSITY (UK)
7. LONDON METROPOLITAN UNIVERSITY (UK)
8. MARKES INTERNATIONAL LIMITED (UK)
9. DISTRETTO AGROALIMENTARE REGIONALE SCRL (IT)
10. FRESH PLAZA BV (NL)
11. 80G SA (PT)
12. EINAT FOOD INDUSTRIES AGRICULTURAL COOPERATIVE SOCIETY LTD (IL)
13. INSTYTUT OGRODNICTWA (PL)
14. AGRONOMIA SCARL (IT)

KBBE-2011-2-4-01

Safety and quality of ready-to-eat foods

QUAFETY

www.quafety.eu


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

SOPHY



Development of a Software tool for Prediction of ready-to-eat food product shelf life, quality and safety

The SOPHY project aims to develop a web-based software tool for prediction of product safety, quality and shelf life of ready-to-eat products. Fresh cut salads and deli salads were chosen as the model food system. Food producers will be able to optimise their raw material selection, product formulation and processing steps virtually. The software estimates the effect of each production step on the safety (growth or survival of relevant pathogens) and shelf life (growth of specific spoilage organisms and/or formation of undesirable by-products) while considering quality (organoleptic characteristics and other quality parameters). The predictive and probabilistic models are based on existing data sets of bacterial growth and quality changes under various conditions generated during previous studies (where available) and data generated during the project. Users will also have the possibility to insert their own data, e.g. initial bacterial contamination. The web-based software can be continuously expanded – even after the end of the project – by inserting new data sets (e.g. other food products, different environmental conditions, etc.). Furthermore, the project aims not only to develop predictive and probabilistic models, but also to compile information about different processing techniques, product formulations (e.g. clean label), environmental conditions (e.g. modified atmosphere packaging) as well as hygiene, quality and safety management. These information sheets aim to educate food producers, as they should not only see the effect of different factors on shelf life and pathogen growth calculated by the models, but also understand why. This increased awareness is crucial in improving overall food safety and quality. Information of this nature is essential for small businesses with limited technical resources.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,879,156.00

PROJECT N°

289053

DURATION

36 months

PROJECT START DATE

February 2012

LIST OF PARTNERS

1. VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. (DE)
2. NATIONAL TECHNICAL UNIVERSITY OF ATHENS (EL)
3. AGRICULTURAL UNIVERSITY OF ATHENS (EL)
4. CAMPDEN BRI (UK)
5. THE UNIVERSITY OF BIRMINGHAM (UK)
6. CHAINFOOD BV (NL)
7. NEUE MAYO FEINKOST GMBH (DE)
8. CE KALAMARAKIS-KALAS SA (EL)
9. BRYANS SALADS LTD (UK)
10. BIOZ00N GMBH (DE)

KBBE-2011-2-4-01

Safety and quality of ready-to-eat foods

SOPHY

www.sophy-project.eu


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

STARTEC



Decision Support Tools to ensure safe, tasty and nutritious Advanced Ready-To-Eat foods for healthy and vulnerable Consumers

Food business operators must make daily decisions about food safety and quality, often based on limited scientific data, or full knowledge of the consequences of deviations for the consumer, due to the limited capacity to carry out analyses and risk assessments. This project will develop the necessary tools based on scientific evidence and predictive and probabilistic models to enable food operators estimate the quality and safety level in their products (ready-to-eat foods) if alternative ingredients, process and storage conditions are applied. Pathogens to be studied include: *Listeria monocytogenes*, *Staphylococcus aureus*, *Salmonella enterica*, *Bacillus cereus*, Verotoxin-producing *E.coli* (VTEC) and *Clostridium* spp, as well as *Staphylococcus* toxins. High pressure treatment, dielectric heating, biopreservation and packing technologies will be investigated. Food quality factors will also be assessed. The project focuses in particular on vulnerable consumers where increased quality and safety levels are needed, e.g. patients at nursing homes, hospitals, old and sick people living at home. The project will run for three years and involves eight participants, of which five are SMEs. Producers of convenience and RTE products will be actively involved in the project as well as experts in food microbiology, food chemistry, food process technology, information technology and modelling, laboratory analytical methods, cost-benefit analysis and risk assessment. The decision making tool to be developed will enable the SME operator to quantify and manage spoilage and pathogen risks in a way which is not currently possible. A cost-benefit module will be included in the tool, allowing the food providers to compare quality, safety and costs of their actions, or any abuse conditions along the food supply chain. A prototype of the tool will be tested and validated during the project.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,946,283.00

PROJECT N°

289262

DURATION

36 months

PROJECT START DATE

February 2012

LIST OF PARTNERS

1. VETERINAERINSTITUTTET - NATIONAL VETERINARY INSTITUTE (NO)
2. THE QUEEN'S UNIVERSITY OF BELFAST (UK)
3. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
4. INNOVACIO I RECERCA INDUSTRIAL I SOSTENIBLE SL (ES)
5. MATBORSEN AS (NO)
6. KOHINOOR LIMITED (IE)
7. FORNO ROMAGNOLO SRL (IT)
8. CUSTOMISED FOOD INDUSTRY TRAINING LTD (IE)

KBBE-2011-2-4-01

Safety and quality of ready-to-eat foods

STARTEC

www.startec-eu.info


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

TDSEXPOSURE



Total Diet Study Exposure

Total Diet Studies (TDS) allow getting information on real dietary exposure to food contaminants consumption (heavy metals, mycotoxins, POPs...) and estimating chronic exposure to pesticide residues in food and food additives intake. TDS consider total exposure from whole diets and are based on food contamination as consumed rather than contamination from raw commodities, thus ensuring a realistic exposure measure. TDS facilitate risk assessment (RA) and health monitoring (HM). Some EU Member States (MS) and Candidate Countries (CC) have no TDS programme or use various methods to collect data, which have not been examined yet to tell whether they are comparable or not. This is of interest for EFSA or WHO-FAO. Similarly, it is important to harmonise methods to assess dietary exposure risks in MS, CC and at European level compared with other world regions.

The methods proposed will aim for food sampling, standard analytical procedures, exposure assessment modelling, priority foods and selected chemical contaminants consistency across MS and CC. Various approaches and methods to identify sampling and analyses will be assessed and best practice defined. Contaminants and foods which contribute most to total exposure in European populations will be defined. Priority will be given to training and support in EU, MS and CC currently without TDS. It will demonstrate best practice in creating a TDS programme using harmonised methods in regions previously lacking TDS, and ensure consistency of data collected. A database will be set up describing existing EU studies and collating harmonised exposure measures and designed to allow risk assessors and managers handling dietary exposure more accurately and more specifically.

TDS-EXPOSURE will spread excellence in TDS throughout stakeholders and establish a legacy of harmonised methods for sampling and analysis, and science-based recommendations for future global studies.

PROJECT COORDINATOR

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FUNDING SCHEME CP

EC CONTRIBUTION € 5,967,951.00

PROJECT N° 289108

DURATION 48 months

PROJECT START DATE

February 2012

LIST OF PARTNERS

1. AGENCE NATIONALE DE SECURITE SANITAIRE DE L'ALIMENTATION, DE L'ENVIRONNEMENT ET DU TRAVAIL (FR)
2. INSTITUTE OF FOOD RESEARCH (UK)
3. EUROPEAN FOOD INFORMATION RESSOURCE AISBL (BE)
4. RIJKSINSTITUUT VOOR VOLKSGEZONDHEIDEN MILIEU/NATIONAL INSTITUTE FOR PUBLIC HEALTH AND THE ENVIRONMENT (NL)
5. STATNI ZDRAVOTNI USTAV (CZ)
6. ISTITUTO NAZIONALE DI RICERCA PER GLI ALIMENTI E LA NUTRIZIONE (IT)
7. BUNDESINSTITUT FUER RISIKOBEWERTUNG (DE)
8. UNIVERSIDAD DE GRANADA (ES)
9. UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN (IE)
10. UNIVERSITEIT GENT (BE)
11. HRVATSKA AGENCIJA ZA HRANU USTANOVA (HR)
12. PARTIKAS UN VETERINARA DIENESTA NOVVERTESANAS UN REGISTRACIJAS CENTRS (LV)
13. FINNISH FOOD SAFETY AUTHORITY EVIRA (FI)
14. AGENCIA ESPANOLA DE SEGURIDAD ALIMENTARIA Y NUTRICION (ES)
15. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
16. INSTITUTO NACIONAL DE SAUDE DR. RICARDO JORGE (PT)
17. NASJONALT FOLKEHELSEINSTITUTT (NO)
18. MATIS OHF (IS)
19. INSTYTUT ZYWNOSCI I ZYWIENIA (PL)
20. ISTITUTO SUPERIORE DI SANITA (IT)
21. TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU (TR)
22. UNIVERSITAT ROVIRA I VIRGILI (ES)
23. VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. (BE)
24. LIVSMEDELS VERKET (SE)
25. EIDGENÖSSISCHE TECHNISCHE HOCHSCHULE ZÜRICH (CH)
26. INTERNATIONAL LIFE SCIENCES INSTITUTE EUROPEAN BRANCH AISBL (BE)

KBBE-2011-2-4-02

Pan-European Total Diet Study

TDSEXPOSURE

www.tds-exposure.eu



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-4 Food Quality and Safety

VITAL



Integrated Monitoring and Control of Foodborne Viruses in European Food Supply Chains

The concept of VITAL was the integrated monitoring and control of contamination of the European food supply chain by pathogenic viruses. VITAL used standardised methods to detect norovirus, hepatitis A virus and hepatitis E virus, and representative viruses (human adenovirus, porcine adenovirus, and bovine polyomavirus) throughout three food supply chains – salad vegetable, soft fruit, and pork – from farm to market (and also at point-of-sale for shellfish).

An extensive amount of data on virus prevalence was collected, which revealed vulnerability to virus contamination at several points in each food supply chain. Using the data, risk assessments were performed, which have shown that estimated health risks were significant in some cases (e.g., NoV in shellfish or HEV in pork sausage) when consumption and dose-response were considered in combination with the data on virus concentrations in different sources and foods along the food production chains. VITAL performed a series of fact-finding missions to examine the food safety management practices in the supply chains where the data on virus contamination was gathered. The information acquired through these missions showed that key areas of concern were non-compliance with good prerequisite safety management practices that could open vulnerabilities in the food chains to virus contamination. Notably, in primary production of soft fruit and salad vegetables, analysis of areas of concern and virus contamination data revealed correlation between key non-compliances (poor quality irrigation water, poor sanitation, poor hand hygiene) and contamination of produce. VITAL has determined that in particular that compliance with prerequisite programs, such as the forthcoming Codex Guidelines, is essential to reduce the risk of contamination of food supply chains with viruses. To complement the Codex guidelines, and assist in compliance with prerequisite safety programs, VITAL Guidance Sheets were developed. With clear recommendations on regaining control through compliance with prerequisite programs, and the monitoring procedures which VITAL has outlined, the aim of integrated monitoring and control of foodborne viruses in the food supply chains can be fulfilled.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,921,954.00

PROJECT N°

213178

DURATION

42 months

PROJECT START DATE

April 2008

LIST OF PARTNERS

1. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
2. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
3. VYZKUMNY USTAV VETERINARNIHO LEKARSTVI (CZ)
4. HELSINGIN YLIOPISTO (FI)
5. UNIVERSITY OF PATRAS (EL)
6. ISTITUTO SUPERIORE DI SANITA (IT)
7. RIJKSINSTITUUT VOOR VOLKSGEZONDHEID EN MILIEU (NL)
8. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
9. PANSTWOWY INSTYTUT WETERYNARYJNY - PIWET (PL)
10. SCIENTIFIC VETERINARY INSTITUTE NOVI SAD (RS)
11. UNIVERZA V LJUBLJANI (SI)
12. INSTITUTO TECNOLOGICO AGRARIO DE CASTILLA Y LEON (ES)
13. UNIVERSITAT DE BARCELONA (ES)

KBBE-2007-2-4-03

New methods for the monitoring and control of foodborne viruses

VITAL

www.eurovital.org


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-5 Environmental Impacts and Total food Chain

AGRIFOODRESULTS



European Initiative for a better use of the results of agri-food research

AgriFoodResults was one of the first projects supported by DG Research and Innovation focusing on dissemination of food research results. As a "pioneer project", it covered key issues related to the communication of scientific communication: the study of current practices (through a survey on dissemination activities in FP6 and FP7 projects relevant to the food sector), capacity development (through the preparation of guidelines and the delivery of training), the development of innovative communication tools (wiki website, web 3D) and the study of best practice for the food sector (through a study on the cost-effectiveness of dissemination activities).

The focus was primary on small and medium-sized enterprises (SMEs) and small research projects and there were three main objectives:

- to offer innovative and sustainable dissemination services
- to improve European food scientists' dissemination practices
- to disseminate recent results from agri-food research projects.

The project produced:

- A survey report on dissemination practices in FP6 and FP7 food research projects;
- A report on strategies for communication of scientific results in the food sector;
- Four sets of guidelines: a general guide for dissemination managers and three guides for communication targeting specific audiences (food SMEs, policy makers and consumers);
- An on-line directory listing contact details for more than 200 information relays relevant to the food sector;
- Virtual supermarket: an innovative web solution for communicating project results;
- AgriFoodResults.eu/wiki: a collaborative website presenting results of food research projects;
- Communication Star 2011: a European competition rewarding European food research projects for their dissemination practices;
- A final report summarising the key findings and presenting recommendations on communicating results from food research projects to be taken into account in the Framework Programme Horizon 2020.

The reports and tools will remain available at www.agrifoodresults.eu until at least 2014. Registered members have access to the directory and can publish information about their events. Scientists and communication managers are encouraged to include their results in the virtual supermarket and in AgriFoodResults.eu/wiki.

KBBE-2008-2-5-03

Dissemination of research projects in the food sector

AGRIFOODRESULTS

www.agrifoodresults.eu

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

996,383.00

PROJECT N°

226927

DURATION

25 months

PROJECT START DATE

May 2009

LIST OF PARTNERS

1. ASSOCIATION DE COORDINATION TECHNIQUE POUR L'INDUSTRIE AGROALIMENTAIRE (FR)
2. EUROQUALITY SARL (FR)
3. AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA (IT)
4. ANONYMI ETAIREIA VIOMICHANIKIS EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS TIS VIOMICHANIAS TROFIMON - FOOD INDUSTRIAL RESEARCH AND TECHNOLOGICAL DEVELOPMENT COMPANY SA (EL)
5. INOVAMAIS - SERVICOS DE CONSULTADORIA EM INOVACAO TECNOLÓGICA S.A. (PT)
6. INNWISE GMBH (DE)
7. PIXELPARK AG* (DE)
8. FOOD-PROCESSING INITIATIVE E. V (DE)
9. CAMPDEN BRI MAGYARORSZAG NONPROFIT KORLATOLT FELELOSSEGU TARSASAG (HU)
10. LUNDS UNIVERSITET (SE)
11. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
12. ASOCIACION DE INVESTIGACION DE LA INDUSTRIA AGROALIMENTARIA. (ES)
13. INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU BIORESURSE ALIMENTARE (RO)
14. EUROPEAN FOOD INFORMATION COUNCIL AISBL (BE)
15. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
16. ECOLE NATIONALE VETERINAIRE, AGROALIMENTAIRE ET DE L'ALIMENTATION NANTES ATLANTIQUE (FR)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-5 Environmental Impacts and Total food Chain

AQUAVALENS



Protecting the health of Europeans by improving methods for the detection of pathogens in drinking water and water used in food preparation

The AQUAVALENS consortium has brought together SMEs, Industries, Universities and Research Institutes with the mission of protecting the health of European Citizens from contaminated drinking water and water used in food processing. We will achieve this by developing sustainable technologies to enable water system managers whether in large or small water systems or within food growers or manufacturers to better control the safety of their water supplies. The work of the project is divided into four main clusters of work packages that sequentially lead to the development of appropriate technologies. These four clusters are: 1. Platform targets, 2. Platform development, 3. Field studies in European drinking water systems, and 4. Improving Public Health through safer water. In cluster 1 we shall generate new knowledge on the molecular genetics of viral, bacterial and parasitic waterborne pathogens. This will enable us to identify gene targets for the identification, and characterisation of these pathogens, that will also enable the determination of their virulence for humans. In cluster 2 we shall use the knowledge gained to develop new technologies that integrate sample preparation and detection into a single platform. These platforms will then be subject to a rigorous process of validation and standardisation. In cluster 3 we will use the validated platforms to undertake a series of field studies in large and small drinking water systems, and in food production. These field studies will generate new knowledge about the risk to public health from waterborne pathogens in Europe and also test the value of the technologies in the field. Finally in cluster 4 we test how these technologies can be used to protect human health, though improving the effectiveness of Water Safety Plans, adaptation to climate change, and control of outbreaks of infectious disease. We will also determine the sustainability and potential economic impacts of these technologies.

KBBE-2012-2-5-01

Microbially safe water for human consumption

AQUAVALENS



Website not available yet

**PROJECT COORDINATOR**

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FUNDING SCHEME CP**EC CONTRIBUTION** € 8,963,425.00**PROJECT N°** 311846**DURATION** 60 months**PROJECT START DATE**

February 2013

LIST OF PARTNERS

1. UNIVERSITY OF EAST ANGLIA (UK)
2. UNIVERSITAT DE BARCELONA (ES)
3. HELMHOLTZ-ZENTRUM FUER INFESTIONSFORSCHUNG GMBH (DE)
4. PUBLIC HEALTH WALES NATIONAL HEALTH SERVICE TRUST (UK)
5. DANMARKS TEKNISKE UNIVERSITET (DK)
6. SVERIGES LANTBRUKSUNIVERSITET (SE)
7. HERIOT-WATT UNIVERSITY (UK)
8. CENTRE EUROPEEN D'EXPERTISE ET DE RECHERCHE SUR LES AGENTS MICROBIENS SAS (FR)
9. DVGW DEUTSCHE VEREINIGUNG DES GAS-UND WASSERFACHES - TECHNISCH-WISSENSCHAFTLICHER VEREIN EV (DE)
10. CETAQUA, CENTRO TECNOLOGICO DEL AGUA, FUNDACIÓN PRIVADA (ES)
11. INSTITUTO SUPERIOR TECNICO (PT)
12. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
13. HASKOLI ISLANDS (IS)
14. UNIVERSITAT ROVIRA I VIRGLI (ES)
15. MOREDUN RESEARCH INSTITUTE (UK)
16. UNIVERSITY OF SURREY (UK)
17. TECHNISCHE UNIVERSITAET WIEN (AT)
18. MEDIZINISCHE UNIVERSITAET WIEN (AT)
19. RIBOCON GMBH (DE)
20. GENETIC PCR SOLUTIONS SL (ES)
21. UNIVERSITA DEGLI STUDI DI GENOVA (IT)
22. LIVSMEDELS VERKET (SE)
23. HELSINGIN YLIOPISTO (FI)
24. DRUSTVO ZA TRGOVINU I USLUGE EXPORT IMPORT DESING DOO (RS)
25. EPIGEM LIMITED (UK)
26. MOREDUN SCIENTIFIC LIMITED (UK)
27. FACULTY OF AGRICULTURE - UNIVERSITY OF BELGRADE (RS)
28. RAJKOVIC NENAD (RS)
29. ENKROTT QUIMICA - GESTAO DE PROCESSOS QUIMICOS SA (PT)
30. VERMICON AKTIENGESellschaft (DE)
31. MBONLINE GMBH (AT)
32. THE JAMES HUTTON INSTITUTE LBG (UK)
33. THE UNIVERSITY OF EDINBURGH (UK)
34. HOJMARKLABORATORIET AS (DK)
35. WRC PLC (UK)
36. CITY ANALYSTS LTD (IE)
37. INSTITUTTET FOR PRODUKTUDVIKLING - IPU (DK)
38. NORDVAND AS (DK)
39. PARKER HANNIFIN MANUFACTURING LTD (UK)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-5 Environmental Impacts and Total food Chain

FUSIONS



Food Use for Social Innovation by Optimising waste prevention Strategies

FUSIONS (Food Use for Social Innovation by Optimising waste prevention Strategies) will contribute to achieving a Resource Efficient Europe by significantly reducing food waste. It will achieve this through a comprehensive and experienced European partnership covering all key actors across the food supply chain, including regulatory, business, NGOs and knowledge institutes, all with strong links to consumer organisations. FUSIONS will establish a tiered European multi-stakeholder Platform to generate a shared vision and strategy to prevent food loss and reduce food waste across the supply chain through social innovation: new ideas (products, services and models) that simultaneously meet social needs (more effectively than alternatives) and create new social relationships or collaborations.

The overall aim of the project is to contribute significantly to the harmonisation of food waste monitoring, feasibility of social innovative measures for optimised food use in the food chain and the development of a Common Food Waste Policy for EU27. Utilising the policy and behavioural change recommendations from the delivery of the key objectives, the FUSIONS European multi-stakeholder platform will enable, encourage, engage and support key actors across Europe in delivering a 50% reduction in food waste and a 20% reduction in the food chains resource inputs by 2020.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

3,999,901.00

PROJECT N°

311972

DURATION

48 months

PROJECT START DATE

August 2012

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. THE WASTE AND RESOURCES ACTION PROGRAMME LBG (UK)
3. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
4. SIK - INSTITUTET FOER LIVSMEDEL OCH BIOTEKNIK AB (SE)
5. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
6. BIO INTELLIGENCE SERVICE SA (FR)
7. OSTFOLDFORSKNING AS (NO)
8. SELINA JUUL (DK)
9. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
10. INSTITUTE OF FOOD RESEARCH (UK)
11. FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS FAO (IT)
12. IVL SVENSKA MILJOEINSTITUTET AB (SE)
13. MAA JA ELINTARVIKETALOUDEN TUTKIMUSKESKUS (FI)
14. HACETTEPE UNIVERSITESI (TR)
15. MAGYAR ELELMISZERBANK EGYEULET (HU)
16. ANAPTIKSIAKI ANONYMI ETERIA O.T.A. ANATOLIKIS THESSALONIKIS - KENTRO ANAPTIKSIS ANTHROPINOOU DINAMIKOU KAI ENISCHISIS TIS TOPIKIS OIKONOMIAS (DEVELOPMENT AGENCY OF EASTERN THESSALONIKI'S LOCAL AUTHORITIES) (EL)
17. UNIVERSITAET HOHENHEIM (DE)
18. LAST MINUTE MARKET SRL (IT)
19. KONINKLIJKE AHOLD N.V. (NL)
20. COMMUNIQUE AS (DK)
21. TRISTRAM JAMES STUART (UK)

KBBE-2012-2-5-02

Optimising food use for social innovation

FUSIONS

Website not available yet



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-5 Environmental Impacts and Total food Chain

GLAMUR



Global and Local food chain Assessment: a Multidimensional performance-based approach

General objective of the project is to integrate advancement in scientific knowledge about the impact of food chains with application of knowledge to practice to increase food chains sustainability through public policies and private strategies. This general objective will be pursued through the following specific objectives:

- To develop and validate a 'performance criteria matrix' for assessment and comparison of food chains operating at a range of geographical scales through analysis of how food chain impacts are communicated in different spheres of society.
- To build a database of quantifiable indicators of impact and a set of 20 case studies aimed at understanding how impacts are generated within specific food chains.
- To advance knowledge on methodological problems and trade-offs arising when measuring and comparing the impact of food chains within and between sectors.
- To assess how performance is perceived by stakeholders in different national contexts through participatory assessment and multicriteria analysis of the different typologies of food chains.
- To assess the actual and potential role of public and private policies addressing food chains and to turn assessment into policy recommendations.
- To build a network that turns the advancement of scientific knowledge into decision making tools for domestic and public consumers, producers, citizens, scientists, policy makers, civil society organizations.

The project will be developed around the following assumptions:

- Costs and benefits analysis needs methodological update: for this reason the broader concept of performance is used
- The performance of food chains has multiple dimensions (economic, social, environmental, health, ethical)
- To turn knowledge into practice a demand-driven approach is necessary, focusing on how food choice affects the five dimensions of impact

The complexity of impacts of food chains requires plurality of methods and transdisciplinarity.

KBBE-2012-2-5-03

GLAMUR



A comparative analysis of global versus local food supply systems

Website not available yet



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,932,328.00

PROJECT N°

311778

DURATION

36 months

PROJECT START DATE

February 2013

LIST OF PARTNERS

1. WAGENINGEN UNIVERSITEIT (NL)
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3. THE CITY UNIVERSITY (UK)
4. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
5. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
6. FORSCHUNGSINSTITUT FÜR BIOLOGISCHENLANDBAU STIFTUNG (CH)
7. CLM ONDERZOEK EN ADVIES BV (NL)
8. CENTRO RICERCA PRODUZIONI ANIMALI - C.R.P.A. S.P.A. (IT)
9. UNIVERSITAT AUTONOMA DE BARCELONA (ES)
10. UNIVERSITY OF GLOUCESTERSHIRE (UK)
11. UNIVERSITY OF THE WEST OF ENGLAND, BRISTOL (UK)
12. NODIBINAJUMS BALTIC STUDIES CENTRE (LV)
13. AALBORG UNIVERSITET (DK)
14. EKONOMSKI FAKULTET, UNIVERZITET U BEOGRADU (RS)
15. INTERNATIONAL INSTITUTE FOR ENVIRONMENT AND DEVELOPMENT (UK)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-5 Environmental Impacts and Total food Chain

GMSAFOOD



Biomarkers for post market monitoring of short and long-term effects of genetically modified organisms (GMOs) on animal and human health

The function of post market monitoring is to further assess possible nutritional and health effects of authorized GM foods on a mixed population of human and animal consumers. Currently, however, little is known about exposure levels, whether adverse effects are predictable, and the occurrence of any unexpected effects following market release of GM foods. Our objective is to identify a panel of anatomic, physiologic, biochemical, molecular, allergenic, and immunogenic biomarkers, which could be used to predict harmful GMO effects after product authorization. Using a prototype allergenic α -amylase inhibitor GM-pea, we will extrapolate multiple biomarker databases that correlate GMO effects during gestation, growth, maturation in various animal models with humans. We will establish biomarkers in GMO-fed pigs, salmon, rats, and mice, in addition to indirect effects of GM feeding in the food chain and GMO influence during an underlying allergic disorder. These experiments will yield data on general health with a specific focus on allergy and immunology. To extrapolate our data to humans, we will establish a comparative database with antigenic epitopes and antibody crossreactivity in legume allergic patients and human-mouse chimera in which a human immune system is transplanted into a mouse lacking an immune system. Taken together, these results will yield databases from multiple biological systems that will be used in a mathematical modeling strategy for biomarker discovery and validation. Our consortium consists of partners from Austria, Turkey, Hungary, Ireland, Norway, and Australia and constitutes a diverse interdisciplinary team from veterinary medicine, nutrition, agriculture, immunology, and medicine that is dedicated to the development and validation of biomarkers to be used for post market monitoring of animals and humans consuming newly authorized GMOs.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,606,622.00

PROJECT N°

211820

DURATION

44 months

PROJECT START DATE

August 2008

LIST OF PARTNERS

1. MEDIZINISCHE UNIVERSITAET WIEN (AT)
2. COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION (AU)
3. NORGES VETERINAERHOGSKOLE (NO)
4. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
5. KOZPONTI ELELMISZER-TUDOMANYI KUTATOINTEZET (HU)
6. TROYKA MAKINA GIDA INSAAT MUHENDISLIK ENERJI CEVRE BILISIM ARASTIRMA GELISTIRME DANISMANLIK SANAYI VE PAZARLAMA LIMITED SIRKETI (TR)

KBBE-2007-2-5-01

Assessment of short and long term effects of
GMOs on human and animal health

GMSAFOOD

www.gmsafoodproject.eu


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-5 Environmental Impacts and Total food Chain

GRATITUDE



Gains from Losses of Root and Tuber Crops

Cassava and yam are important food security crops for approximately 700 million people. Post-harvest losses are significant and come in the three forms: (a) physical; (b) economic through discounting or processing into low value products and (c) from bio-wastes. This project aims to reduce these losses to enhance the role that these crops play in food and income security.

Post-harvest physical losses are exceptionally high (ca. 30% in cassava and 60% in yam) and occur throughout the food chain. Losses in economic value are also high (e.g. cassava prices discounted by up to 85% within a couple of days of harvest).

Wastes come in various forms e.g. peeling losses can be 15-20%. Waste often has no economic value which can make processing a marginal business proposition.

South-south learning is a feature of the project – with partners in sub-Saharan Africa and Asia. Cassava and yam are contrasting in terms of their use and these differences will contribute to developing a comprehensive approach to reducing losses. Technologies and systems will be developed, validated, demonstrated and disseminated that focus benefits on small-holder households whilst offering increased income earning opportunities through SME development and links to large scale industry. These contribute to the comprehensiveness of the approach, and provide diverse learning opportunities and allow examination of losses in a wider food security context.

There are 3 impact pathways:

1. reduction of physical losses – focussing on fresh yam storage
2. value added processing reducing physical and economic losses in yam and cassava.
3. improved utilisation of wastes (peels, liquid waste, spent brewery waste) producing products for human consumption including snack foods, mushrooms and animal feed.

Cross-cutting are issues of food safety, enterprise development and practical demonstration.

It is aimed to validate technologies capable of reducing losses by an equivalent of at least 50%

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,850,413.00

PROJECT N°

289843

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. UNIVERSITY OF GREENWICH (UK)
2. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
3. UNIVERSIDADE CATOLICA PORTUGUESA (PT)
4. ACCORD ASSOCIATES LLP (UK)
5. SABMILLER PLC (UK)
6. UNIVERSITY OF AGRICULTURE ABEOKUTA (NG)
7. COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (GH)
8. FEDERAL MINISTRY OF SCIENCE AND TECHNOLOGY (NG)
9. NATIONAL SCIENCE AND TECHNOLOGY DEVELOPMENT AGENCY (TH)
10. ST. BAASA GHANA LIMITED (GH)
11. CALTECH VENTURES LTD (GH)
12. VIEN CONG NGHE SINH HOC VA THUC PHAM (VN)
13. PEAK PRECISION PRODUCTS NIGERIA LIMITED (NG)
14. NOBEX TECHNICAL COMPANY LIMITED (NG)
15. SOCIAL DEVELOPMENT AND IMPROVEMENT AGENCY LBG (GH)
16. NORTHEASTERN STARCH (1987) CO LTD. (TH)

KBBE-2011-2-5-02

Reducing post-harvest losses for increased food security — SICA

GRATITUDE

www.fp7-gratitude.eu



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-5 Environmental Impacts and Total food Chain

MYCORED



Novel integrated strategies for worldwide mycotoxin reduction in the food and feed chains

Mycotoxins are secondary metabolites produced by fungi that are toxic to humans and animals. They represent an important and sensitive problem, as various many products we normally consume in our diet are exposed to their contamination. Mycotoxins are dangerous for feed and food chains as they can create contamination in pre- and post-harvest processes.

The following toxins and commodities are a focus of the MycoRed research: aflatoxins, trichothecenes, zearalenone, fumonisins in wheat/maize food and feed chains; ochratoxin A in the grape-wine and wheat chains; and aflatoxins in the dried fruit chain.

The project will develop novel solution-driven methodologies and handling procedures to reduce both pre- and post-harvest contamination in selected feed and food chains. It will also generate and disseminate information and education strategies so as to reduce mycotoxin risks at a global level. High risk areas will receive particular attention, through cooperation with international agriculture and food organisations.

The project will build on the outcome of several previous EU projects on mycotoxins by supporting, stimulating and facilitating education and cooperation with countries reporting major mycotoxin concerns with a potential impact on (international) trade and human health. The direct involvement of ICPC countries (Argentina, Egypt, Russia, South Africa, Turkey) and international organisations (CIMMYT, IITA), together with strong 18 alliances with major research institutions in the USA, Australia, China, Japan, Malaysia and two twinnings with Argentina and Canada will strengthen the project. Partners will share experiences and resources from several past and ongoing mycotoxin projects in a global context.

The team expects to produce novel methodologies, efficient handling procedures and information, dissemination and educational strategies to reduce mycotoxins exposure worldwide. Five work-packages will develop novel solution driven strategies to reduce both pre-and post-harvest contamination in feed and food chains.

KBBE-2007-2-5-05

MYCORED



Reduce mycotoxin contamination in the food and feed chain

www.mycored.eu



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,769,956.00

PROJECT N°

222690

DURATION

54 months

PROJECT START DATE

April 2009

LIST OF PARTNERS

1. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
2. CRANFIELD UNIVERSITY (UK)
3. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
4. DANMARKS TEKNISKE UNIVERSITET (DK)
5. MAX RUBNER INSTITUT BUNDESFORSCHUNGSINSTITUT FUR ERNAHRUNG UND LEBENSMITTEL (DE)
6. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
7. UNIVERSITA CATTOLICA DEL SACRO CUORE (IT)
8. CEREAL RESEARCH NON-PROFIT COMPANY (HU)
9. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
10. RIJKSINSTITUUT VOOR VOLKSGEZONDHEID EN MILIEU (NL)
11. TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU (TR)
12. A.N. BAKH INSTITUTE OF BIOCHEMISTRY OF THE RUSSIAN ACADEMY OF SCIENCES (RU)
13. NATIONAL RESEARCH CENTER (EG)
14. INTERNATIONAL INSTITUTE OF TROPICAL AGRICULTURE (NG)
15. CENTRO INTERNACIONAL DE MEJORAMIENTO DE MAIZ Y TRIGO INT (MX)
16. UNIVERSIDAD NACIONAL DE RIO CUARTO (AR)
17. UNIVERSIDAD DE LLEIDA (ES)
18. ROMER LABS DIAGNOSTIC GMBH (AT)
19. BIO-FERM, BIOTECHNOLOGISCHE ENTWICKLUNG UND PRODUKTION GMBH (AT)
20. MATRIX SRL (IT)
21. FUNDACIO PRIVADA INTERNACIONAL TREENUT (ES)
22. FEDERATION EUROPEENNE DES FABRICANTS D'ADDITIFS POUR LA NUTRITION ANIMALE (BE)
23. SOUTH AFRICAN MEDICAL RESEARCH COUNCIL (ZA)
24. UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA (IT)
25. UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II. (IT)
26. ROMER LABS DIVISION HOLDING GMBH (AT)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-5 Environmental Impacts and Total food Chain

NETGROW



Enhancing the innovativeness of food SME's through the management of strategic network behaviour and network learning performance

Strategic network learning is of crucial importance for innovation as it enables the food company to expand its resource base and to absorb new trends and technologies. It is observed that food SMEs often fail to establish a strategic and efficient network. NETGROW project sheds new light on this issue by combining research actions at two levels:

- the focal company level, investigating how attitudes and preferences determine the food SMEs individual network behaviour in order to achieve business objectives;
- the network level, investigating the functioning of the network as a whole; how this results in innovation and economic growth, and how network stakeholders can improve the performance of the network.

The project combines scientific research with developing network learning tools of practical use to food SMEs, network organisations and policy makers. A broad definition of networks is applied, including networking with competitors, suppliers, knowledge centres and a variety of other actors through formal and informal linkages.

The research activities take three steps:

1. profound analysis of success factors and barriers for network learning. Particular focus is on the relationship between informal and formal networking and global networks;
2. network behaviour is analysed at the focal company level, providing insight into network characteristics affecting innovation and SMEs' preferences for different network designs;
3. a prototype tool is developed and tested to assess performance of the network at network level.

In the development stage of the project, the network learning toolbox will be developed, market-tested and launched. It consists of a set of instruments to enhance the capacity of SMEs, network organisations, and policy makers to improve network learning based on strategic network management. The strength of the toolbox lies in the confrontation of our instruments with the business perspective and two-stage testing within SMEs and network organisations.

The main expected result is to get a greater availability of usable know-how regarding European SME networks.

KBBE-2009-2-5-02

Barriers to network learning in SMEs

NETGROW

www.netgrow.eu


PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,956,186.00

PROJECT N°

245301

DURATION

48 months

PROJECT START DATE

May 2010

LIST OF PARTNERS

1. UNIVERSITEIT GENT (BE)
2. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
3. STICHTING FOOD VALLEY (NL)
4. DEBRECENI EGYETEM (HU)
5. SKANES LIVSMEDELSAKADEMI (SE)
6. INSTITUTE FOR FOOD & AGROINDUSTRIAL DEVELOPMENT (DK)
7. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
8. ASSOCIATION DE GESTION INSTITUT POLYTECHNIQUE LASALLE BEAUVAIS (FR)
9. RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITAET BONN (DE)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-5 Environmental Impacts and Total food Chain

OBELIX



OBesogenic Endocrine disrupting chemicals: Linking prenatal eXposure to the development of obesity later in life

The incidence of childhood obesity has reached epidemic proportions globally and there is an urgent need to increase understanding of the impact of food contaminants on obesity development. The OBELIX project is examining the hypothesis that prenatal exposure to endocrine disrupting compounds (EDCs) in food plays a role in the development of obesity later in life.

Endocrine disruptors are exogenous substances that alter function(s) of the endocrine system and consequently cause adverse health effects in an intact organism, its progeny, or in (sub)populations. This project will assess prenatal exposure to chemicals from six major classes of EDCs found in food, including dioxins and dioxin-like polychlorinated biphenyls (PCBs), non-dioxin-like PCBs, brominated flame retardants (BFRs), organochlorine pesticides, phthalates and perfluorinated alkyl acids (PFAAs), e.g. perfluorooctanoic acid (PFOA) and perfluorooctanesulfonate (PFOS).

The team will use mother-child cohorts from various European regions with different food contaminant exposure patterns to assess prenatal exposure to major classes of endocrine disrupting chemicals (EDCs) in food identified as potential inducers of obesity later in life.

OBELIX will seek to determine the mechanisms of obesogenic EDCs by analysing effect biomarkers, gene expression and epigenetic analysis. Mouse models, in vitro models and analysis in peripheral mononuclear cells of biological samples from the cohorts will be used as complementary tools. Finally, the team will perform a risk assessment of prenatal exposure to obesogenic EDCs in food.

OBELIX is expected to generate new knowledge about prenatal exposure to major classes of EDCs and their potential as a risk factor for obesity later in life. Such knowledge is needed to regulate EDCs appropriately. Two main observations make the need to study the impact of food contaminants on obesity urgent:

- (1) The number of overweight and obese children has increased in most developed societies, particularly over the last 20 years.
- (2) The current obesity epidemic cannot be fully explained by genetic factors or by changes in physical, socio-cultural, economic and political factors.

KBBE-2008-2-5-01

OBELIX



Influence of food contaminants on early programming leading to obesity

www.theobelixproject.org



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,692.00

PROJECT N°

227391

DURATION

48 months

PROJECT START DATE

May 2009

LIST OF PARTNERS

1. VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG (NL)
2. VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. (BE)
3. RIJKSINSTITUUT VOOR VOLKSGEZONDHEID EN MILIEU (NL)
4. NASJONALT FOLKEHELSEINSTITUTT (NO)
5. STICHTING ECOBABY (NL)
6. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
7. SLOVENSKA ZDRAVOTNICKA UNIVERZITA V BRATISLAVE (SK)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-5 Environmental Impacts and Total food Chain

RECAPT



Retailer and Consumer Acceptance of Promising Novel Technologies and Collaborative Innovation Management

There is an increasing recognition that innovation is a task for all actors in the food chain, since innovation should add value to the food chain as a whole and lead to sustainable novel applications. RECAPT aims at supporting a process that leads to closer collaborative management of innovations along the food supply chain. The overall objective of this action is to build a platform that strengthens collaboration between food scientists, food industry and the retailing and catering sectors, such that research findings can be effectively integrated into the development of innovative and sustainable products that meet consumer acceptance, thereby contributing to global competitiveness of the European food sector. More specifically, RECAPT has the following strategic objectives:

1. To promote information exchange and facilitate trust building in order to enhance innovation-oriented cooperation among the actors in the food supply chain.
2. To analyze all parameters and provide all necessary inputs for the realization and viability of those collaborations.

In order to promote information exchange, facilitate trust building and enhance cooperation among actors in the food chain, a Collaborative Food Innovation Forum (CFIF) for effective dialog and collaboration between the food chain actors will be created. The CFIF will be a unique meeting place that will bring together actors from science, food manufacturing, retailing, catering and consumer organisations. Based on input from the different work packages, the CFIF will discuss issues related to promising novel technologies, consumer acceptance of new products based on novel technologies, retailer and caterer adoption of new products as well as innovation management processes in the food chain based on input from the RECAPT partners. In this way, a comprehensive view of the parameters and inputs necessary for increasing collaborative innovation activities in the European food sector will be developed.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

998,762.00

PROJECT N°

289755

DURATION

36 months

PROJECT START DATE

December 2011

LIST OF PARTNERS

1. AARHUS UNIVERSITET (DK)
2. DEUTSCHES INSTITUT FUER LEBENSMITTELTECHNIK (DE)
3. TECHNISCHE UNIVERSITEIT DELFT (NL)
4. THE UNIVERSITY OF STIRLING (UK)
5. WAGENINGEN UNIVERSITEIT (NL)
6. EUROPEAN FOOD INFORMATION COUNCIL AISBL (BE)
7. EUROPEAN FEDERATION OF FOOD SCIENCE AND TECHNOLOGY (NL)
8. EHI RETAIL INSTITUTE GMBH (DE)
9. THE INSTITUTE OF GROCERY DISTRIBUTION LBG (UK)

KBBE-2011-2-5-03

RECAPT

Food science and the retail sector: a platform for preparing the effective integration of research findings within innovative concepts and applications

www.recapt.org


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-5 Environmental Impacts and Total food Chain

SALSA



Knowledge-based Sustainable vAlue-added food chains: innovative toolS for monitoring ethical, environmental and Socio-economical impActs and implementing Eu-Latin America shared strategies

According to bilateral EU-Latin America cooperation agreements, there is a mutual interest in developing strategies to tackle Latin American eco-challenges by promoting social cohesion, economic development, and improving food SMEs markets access. SALSA defines an integrated strategy for reducing negative socio-economic and environmental impact of soya bean and beef chains. The rationale is that these productions influence Latin America eco-challenges, reduction in food security and exclusion of SMEs and smaller farmers from market. SALSA belief is that sustainable competitiveness derives from multi-facet determinants that need to be jointly considered to reach a grass root development. The adoption of guidelines for sustainable agro-food productions is constrained by the lack of: i) technical and managerial solutions able to lower costs and cultural barriers for small farmers and SMEs; ii) research and training supporting new knowledge transfer among the food chain stakeholders and research institutions; iii) consumers and policy makers awareness. SALSA aims at developing monitoring tools based on a Life Cycle thinking approach suitable for integrating ethical, environmental and socio-economical impacts in one consistent model. SALSA provides sustainable solutions (strategies and processes) suitable to support farmers and SMEs relations within entire food chains. Shared benefits for end-users will derive from an increased efficiency of knowledge-based sustainable food production and management: fairer food chain relations, higher incomes, safer and better quality food, reduced environmental burden. SALSA added value relies on strengthening the EU- Latin America cooperation between leading institutions and industries; a joint EU-Latin America Industrial Platform will exploit the results. Guidelines will be produced for the benefits of food chain stakeholders and policy makers to improve food production sustainability and EU-Latin America trade relations.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,493.00

PROJECT N°

265927

DURATION

36 months

PROJECT START DATE

May 2011

LIST OF PARTNERS

1. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
2. WAGENINGEN UNIVERSITEIT (NL)
3. UNIVERSITEIT GENT (BE)
4. FORSCHUNGSINSTITUT FUR BIOLOGISCHENLANDBAU STIFTUNG (CH)
5. PROQUANTIS LTD & CO KG (DE)
6. CAMPDEN BRI MAGYARORSZAG NONPROFIT KORLATOLT FELELOSSEGU TARSASAG (HU)
7. UNIVERSIDADE FEDERAL DE VIÇOSA (BR)
8. EMPRESA BRASILEIRA DE PESQUISA AGROPECUARIA (BR)
9. ROUND TABLE ON RESPONSIBLE SOY ASSOCIATION (CH)
10. BEROEPSVERENIGING VAN DE MENGVOEDERFABRIKANTEN VZW (BE)
11. UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO (MX)
12. FUNDACION SOLIDARIDAD LATINOAMERICANA (PA)

KBBE-2010-2-5-02

SALSA

Eco-challenges in the food chain of the Latin American region – SICA (Latin America)

www.salsaproject.eu

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-5 Environmental Impacts and Total food Chain

SEAT



Sustainable trade in ethical aquaculture

In terms of value, trade in aquatic products is the largest global food sector. The main external source of aquatic products entering the EU is Asia. Current EU policy supporting international trade between Asia and Europe concentrates on food safety issues and quality measures, while market forces drive the development of standards and labels that identify social and environmental parameters. Within this changing framework, SEAT project aims to explore the sustainability of the import of aquaculture products from Bangladesh, China, Thailand and Vietnam, investigating whole value chains for tilapia, catfish, shrimp and prawns. The sectors covered represent the main aquaculture products reaching EU markets where sustainability is essential in the face of rapid market growth.

This extensive investigation is expected to have a significant impact on all parts of the entire chain from those producing aquatics food resources in Asia to the final consumers in Europe. Both producers and consumers will benefit from development of the 'Ethical Aquatic Food Index', a qualitative measure of overall sustainability. It will support consumers' purchasing decisions ensuring that the aquatic products they buy will be of high quality and free of contaminants. At the other end of the chain, it will improve health and safety in production systems as well as processing plants; ensuring workers receive adequate rewards and sustainable livelihoods. By increasing workers' wages, it can raise their standards of living, encouraging increased consumer purchases and providing opportunities for European exports to supply an expanding middle class in Asia.

Development of existing and new certification schemes applicable to aquaculture will increase the potential for change and opportunities for harmonisation leading to systems that are easier to understand, legislate and control. Web development and integrated portals providing better advice and data for targeted end-users will improve transparency of and access to trade-related information. The project will impact on the further development of this by making recommendations to the European Commission regarding the recognition and application of the EAFI for aquaculture products from Asia intended for export to the EU.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,815,578.00

PROJECT N°

222889

DURATION

48 months

PROJECT START DATE

August 2009

LIST OF PARTNERS

1. THE UNIVERSITY OF STIRLING (UK)
2. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
3. KØBENHAVNS UNIVERSITET (DK)
4. WAGENINGEN UNIVERSITEIT (NL)
5. UNIVERSITEIT LEIDEN (NL)
6. SHANGHAI OCEAN UNIVERSITY (CN)
7. CAN THO UNIVERSITY (VN)
8. KASETSART UNIVERSITY (TH)
9. BANGLADESH AGRICULTURAL UNIVERSITY (BD)
10. WWF VERDENSNATURFONDEN (DK)
11. INTERNATIONAL CENTER FOR LIVING AQUATIC RESOURCES (MY)
12. FOOD AND AGRICULTURE ORGANISATION OF THE UNITED NATIONS FAO (IT)
13. UNIVERSITETET I BERGEN (NO)
14. DANISH CENTRE FOR INTERNATIONAL STUDIES AND HUMAN RIGHTS (DK)

KBBE-2007-2-5-05

Sustainability of the food chain

SEAT

www.seatglobal.eu



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-5 Environmental Impacts and Total food Chain

SECUREFISH



Improving food security by reducing post harvest losses in the fisheries sector

Food security is a major concern for all countries in the face of population increase and diminishing energy and water supplies. Over one billion people in low and middle income countries suffer from malnutrition. To meet the UN Millennium Development Goals to Eradicate Hunger and Poverty, it is essential to reduce post harvest losses, including in the fisheries sector. The overall objectives of SECUREFISH are to strengthen capacity in low cost technology; to improve the preservation of existing fish supplies; to utilise waste and bycatch to produce value-added products; to develop an integrated quality management tool and finally to test the developed technology and quality management tool in real conditions different third countries.

There are six work packages (WP). WP1 will ensure the efficient management of the project. WP2 will develop low cost innovative processing tools based on traditional technology for preserving fish including a solar tunnel drier, a modified solar assisted extruder and fast freezing/ continuous atmosphere freeze-drier (CAFD). In WP3, underutilised bycatch and waste by-products of fish processing will be recovered and converted to high value products. WP4 will develop an effective total quality management tool (safety and risk assessment; HACCP quality cost and traceability, nutritional and eating quality and carbon footprint) of three fish product chains (solar dried, extruded and frozen/CAFD) which will be tailored to suit local needs. The technological advances (WP2) and quality management tool (WP4) will be evaluated in the three fish product chain case studies in Africa (Kenya, Namibia, Ghana), Asia (India and Malaysia) and Latin America (Argentina) to include different economic, cultural and social conditions. The case studies involve stakeholders including SMEs to ensure sustained implementation of project results. WP6 details a strategy for education, training and dissemination to widely promote the results and guidelines.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,997,422.00

PROJECT N°

289282

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. UNIVERSITY OF SURREY (UK)
2. INSTITUTO NACIONAL DE RECURSOS BIOLÓGICOS I.P. INRB (PT)
3. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
4. KENYA MARINE AND FISHERIES RESEARCH INSTITUTE (KE)
5. COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (GH)
6. UNIVERSITY OF NAMIBIA (NA)
7. KARNATAKA VETERINARY ANIMAL AND FISHERIES SCIENCES UNIVERSITY (IN)
8. UNIVERSITI TEKNOLOGI MARA (UTM) (MY)
9. INSTITUTO NACIONAL DE TECNOLOGIA INDUSTRIAL (AR)
10. EBBENS ENGINEERING INGENIEURSBUREAU BV (NL)
11. MILLENNIUM EXPORTS PARTNERSHIP (IN)
12. MAYFAIR HOLDINGS LTD (KE)
13. KARNATAKA FISHERIES DEVELOPMENT CORPORATION LTD (IN)

KBBE-2011-2-5-02

SECUREFISH

Reducing post-harvest losses for increased food security — SICA

www.securefish.net


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-5 Environmental Impacts and Total food Chain

SENSE



HarmoniSed ENvironmental Sustainability in the European food and drink chain

SENSE will deliver a harmonised system for the environmental impact assessment of food and drink products. The research will evaluate existing relevant environmental impact assessment methodologies, and consider socio-economical, quality and safety aspects, to deliver a new integral system that can be linked to monitoring and traceability data. The system will integrate: (a) (regionalised) data gathering system; (b) matrix of key environmental performance indicators; (c) methodology for environmental impact assessment; and (d) a certification scheme. The methodology will be transferred to food and drink sectors and stakeholders by means of specific communications strategies. SENSE will validate the new harmonised system in the juice, meat and dairy and aquaculture chains. However, the methodology and its associated software will be modular allowing its implementation in any food product.

The sustainability information collected along the production cycle of any food stuff and reflected into the EID (Environmental Identification Document) will be accessible by the EID-Communication Platform, contributing to make the environmental sustainability part of the usual purchasing behaviour of consumers and provide a competitive advantage to those products which choose to use the EID.

Main results of SENSE will be: (i) Standard key environmental performance indicators (KEPI); (ii) Harmonised methodology for environmental impact assessment; (iii) SENSE-tool for environmental data collection; (iv) EID and EID-Communication Platform; (v) Certification Scheme Concept (CSC) for sustainability; (vi) Roadmap for policy and governance implementation.

SENSE consortium is formed by a multidisciplinary team involving 21 partners from 12 countries made up by a combination of complementary profiles: research organisations, food and drink SMEs, environmental and LCA experts, SMEs for dissemination and communication and European food associations.

KBBE-2011-2-5-01

SENSE



Environmental sustainability in the European food and drink chain

www.senseproject.eu



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,890,067.00

PROJECT N°

288974

DURATION

36 months

PROJECT START DATE

February 2012

LIST OF PARTNERS

1. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
2. AALBORG UNIVERSITET (DK)
3. THE CITY UNIVERSITY (UK)
4. DANMARKS TEKNISKE UNIVERSITET (DK)
5. SIK - INSTITUTET FOER LIVSMEDEL OCH BIOTEKNIK AB (SE)
6. HASKOLI ISLANDS (IS)
7. SGF SERVICE PLUS GMBH (DE)
8. EUROPEAN AQUACULTURE SOCIETY (BE)
9. BIOZOON GMBH (DE)
10. CONSUMER INSIGHT - ANNE CATHARINA BECH (DK)
11. ESU-SERVICES GMBH (CH)
12. TRITECC SRL (RO)
13. INGENET INGENIERIA DE INFORMATICA YCONTROL SL (ES)
14. EFLA HF (IS)
15. ZUMOS VALENCIANOS DEL MEDITERRANEO SA (ES)
16. FODIX GROUP SAS (FR)
17. PROVAC IMPEX SRL (RO)
18. VERENIGING CENTRE DE LIAISON DES INDUSTRIES TRANSFORMATRICES DE VIANDES DE L UE (NL)
19. CALION PROD SRL (RO)
20. TUNAY GIDA SANAYI VE TICARET ANONIM SIRKETI (TR)
21. CHRISTIANSEN PARTNER AS (NO)
22. BA CREATIVOS SL (ES)
23. ZABALA INNOVATION CONSULTING, S.A. (ES)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-5 Environmental Impacts and Total food Chain

SYMBIOSIS-EU



Scientific sYnergisM of nano-Bio-Info-cOgni Science for an Integrated system to monitor meat quality and Safety during production, storage, and distribution in EU

Developing and/or validating easy-to-use chemical/biochemical methods (e.g. biosensors, fluorescence, FT-IR) and molecular methods (DNA microarrays) is the principal goal of the SMBIOSIS-EU project. The team will also develop a suitable software platform for data sharing and integration.

Multivariate statistical methods and machine learning (neural networks, fuzzy logic, genetic algorithms) will be used to identify robust, multiple-compound quality indices. The project will also integrate a sensors and information platform, and develop a system to automatically transform data acquired from a sample into a diagnosis of meat safety and quality.

A website will present current information on the importance of microbial metabolites in meat and other findings. It will also serve as a portal for disseminating information to non-specialist laboratories and small and medium-sized enterprises (SMEs).

The team has developed user-friendly application software that facilitates practical use of the methods and mathematical models validated in this project. This tool will have the potential to improve the competitiveness of the European food sector.

Protocols for the simple, effective and inexpensive evaluation of the meat quality and safety sector will be developed, along with advanced diagnostic methods, based on intelligent and statistical schemes, which can identify robust Multiple Compound Quality Indices (MCQI). Mathematical models to predict shelf life as well as formation of spoilage compounds or other hazards (e.g. biogenic amines etc.) will also be put forward.

The use of an intelligent, multi-sensorial device able to check the quality of meat will ensure higher quality, fulfilling consumers' increasing demands for safe and hygienic food production. The project will also provide basic knowledge tools and resources for the interpretation and management generated data (e.g. genomic, proteomic, metabolomics and phenotype data) that is relevant to microbial behaviour in relation to safety and spoilage of food. Furthermore, it will provide fundamental knowledge (genomics, metabolomics) on the freshness, spoilage and hazards (e.g. biogenic amines, etc.) associated with meat products stored under dynamic conditions, enabling the rational design of procedures for reducing food losses and increasing quality, consumer satisfaction and public health protection.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,280,098.00

PROJECT N°

211638

DURATION

42 months

PROJECT START DATE

October 2008

LIST OF PARTNERS

1. AGRICULTURAL UNIVERSITY OF ATHENS (EL)
2. UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II. (IT)
3. CRANFIELD UNIVERSITY (UK)
4. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
5. VETAGRO SUP 63 (FR)
6. VIDEOMETER A/S (DK)
7. INSTITUTE OF ENVIRONMENTAL SCIENCE AND RESEARCH LIMITED (NZ)
8. THE REGENTS OF THE UNIVERSITY OF COLORADO (US)
9. ZENON S.A. ROBOTICS AND INFORMATICS (EL)
10. TECHNOBIOCHIP S.C.A R.L. (IT)
11. NATIONAL AGRICULTURAL RESEARCH FOUNDATION. (EL)
12. THE UNIVERSITY OF MANCHESTER (UK)
13. PAPADOPOULOS APOSTOLOS SIA OE (EL)
14. FLEX PACKAGING AL SPA (IT)
15. RIJKSINSTITUUT VOOR VOLKSGEZONDHEID EN MILIEU (NL)
16. ZENON AUTOMATION TECHNOLOGIES S.A. (EL)

KBBE-2007-2-5-02

Converging technologies and their potential for the food area

SYMBIOSIS-EU

www.symbiosis-eu.net

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-5 Environmental Impacts and Total food Chain

TRANSFOP



Transparency of Food Pricing

The overall objective of this project is to address the key aspects of the food chain both that determine the transmission of price changes from farm to consumer levels, emphasising the role of competition in the intermediate and retail stages of the food chain and the broader regulatory environment in which firms in food supply chains across the EU compete. Given that the characteristics of the food sector vary considerably throughout the member states of the EU, and the observation that experience resulting from the recent commodity price spikes were significantly different across many countries, a key feature of the project will be to address how the variation in the structure of the food chain across different EU Member States contributes to food price adjustment in individual countries. Further, the project will address on-going developments in the food chain with regard to various aspects of vertical coordination in food supply chains, consolidation in the food sector, how the regulatory environment in which firms compete affects the overall functioning of food supply chains across the EU and the extent to which these issues also impact on SMEs. To this end, the project will address the issue of price adjustment in various dimensions across EU Member States, the selection of Member States reflecting differences in industry structure, the regulatory environment in which firms compete and the experiences they have recently faced with regard to commodity price shocks. In addressing these issues, a selection of different commodity chains (both 'long' and 'short') will form the basis of the analysis. The research project will be expected to result in significant new insights that address the functioning of food supply chains across the EU Member States that impact on food pricing transparency throughout the EU. To this end, the researchers will interact with stakeholder groups representing interests throughout the food chain in forming a potential Action Plan.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

999,992.00

PROJECT N°

265601

DURATION

36 months

PROJECT START DATE

January 2011

LIST OF PARTNERS

1. THE UNIVERSITY OF EXETER (UK)
2. CENTRE DE RECERCA EN ECONOMIA I DESENVOLUPAMENT AGROALIMENTARI-UPC-IRTA (ES)
3. UNIVERSITA CATTOLICA DEL SACRO CUORE (IT)
4. FONDATION JEAN-JACQUES LAFFONT, TOULOUSE SCIENCES ECONOMIQUES (FR)
5. THE UNIVERSITY OF NOTTINGHAM (UK)
6. WIRTSCHAFTSUNIVERSITAT WIEN (AT)
7. CENTMA GMBH (DE)
8. CHRISTIAN-ALBRECHTS-UNIVERSITAET ZU KIEL (DE)
9. GEORG-AUGUST-UNIVERSITAET GOETTINGEN STIFTUNG OEFFENTLICHEN RECHTS (DE)
10. MAGYAR TUDOMANYOS AKADEMIA KOZGAZDASAGTUDOMANYI INTEZET (HU)
11. UNIVERZA NA PRIMORSKEM - UNIVERSITA DELLA PRIMORSKA UNIVERSITA DEL LITORALE (SI)
12. SLOVENSKA POLNOHOSPODARSKA UNIVERSITA V NITRE (SLOVAK AGRICULTURAL UNIVERSITY IN NITRA) (SK)
13. CENTRE FOR EUROPEAN POLICY STUDIES (BE)

KBBE-2010-2-5-01

Transparency of food pricing

TRANSFOP

www.transfop.eu



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-5 Environmental Impacts and Total food Chain

TRANSPARENT_FOOD



Quality and integrity in food: a challenge for chain communication and research

The general objective of the TRANSPARENT_FOOD project was to contribute to the development of transparency in the food sector by understanding its complexities, identifying the present state-of-the-art, learning from experiences, specifying deficiencies and research needs, and formulating a research framework for facilitating future research initiatives.

This general objective was captured in the following four project objectives:

1. identifying the state-of-the art on transparency knowledge and understanding
2. identifying deficiencies in stakeholder transparency and needs for future research initiatives
3. providing transparency uptake support
4. developing transparency awareness

The project aimed at providing transparency in deficiencies that required attention for making a sector wide transparency solution feasible. It has provided the basis for a major impact on the development towards comprehensive and feasible transparency systems.

The following initiatives have been created:

1. BEST PRACTICE INVENTORY ON FOOD TRANSPARENCY

The inventory contains descriptions of successful cases of food transparency systems and can be used by the food businesses as a source of practical information to build up and improve their transparency systems. The inventory is freely available.

2. BEST PRACTICE GUIDE ON FOOD TRANSPARENCY

The objective of the guide is to provide practical advice to food businesses to build up and improve their transparency systems and to policy makers in designing policy measures to improve transparency for consumers. All potential users can have a free access to the guide.

3. TRAINING PACKAGE ON FOOD TRANSPARENCY

The objective of the training package is to provide the basis for systematic knowledge transfer on food transparency. The owner will provide training on fee paying basis.

4. STRATEGIC RESEARCH AGENDA ON FOOD TRANSPARENCY

The purpose of the exploitable foreground is identifying the directions and topics of future research and to provide input for the EU and national research programmes.

5. EUROPEAN TRANSPARENCY PLATFORM

The purpose of the European Transparency Platform is to provide a tool for the dialogue with the stakeholders on food transparency. All stakeholders can use it for improving their knowledge and understanding on food transparency systems.

6. BLUEPRINT PROPOSAL FOR EUROPEAN BACKBONE SOLUTION

The purpose of the foreground is to provide a knowledge base for standardisation of the ICT infrastructure for food transparency systems.

KBBE-2009-2-5-03

Transparency along the food value chain

TRANSPARENT_FOOD www.transparentfood.eu



PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

995,094.00

PROJECT N°

245003

DURATION

24 months

PROJECT START DATE

December 2009

LIST OF PARTNERS

1. RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITAET BONN (DE)
2. KURATORIUM FUER TECHNIK UND BAUWESEN IN DER LANDWIRTSCHAFT E.V. (DE)
3. TECHNISCHE UNIVERSITAT BERLIN (DE)
4. EUROPEAN ASSOCIATION FOR FOOD SAFETY AISBL (BE)
5. SIK - INSTITUTET FOER LIVSMEDEL OCH BIOTEKNIK AB (SE)
6. AARHUS UNIVERSITET (DK)
7. THE CITY UNIVERSITY (UK)
8. RLABS LTD (RLABS EREVNES AGORAS ETERIA PERIORISMENIS EFTHINIS) (EL)
9. UNIVERSITEIT GENT (BE)
10. CAMPDEN BRI MAGYARORSZAG NONPROFIT KORLATOLT FELELOSSEGU TARSASAG (HU)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-5 Environmental Impacts and Total food Chain

VEG-I-TRADE



Impact of climate change and globalisation on safety of fresh produce – governing a supply chain of uncompromised food sovereignty

VEG-I-TRADE will develop problem solving technologies leading to safe food products. It will investigate aspects of water quality and water treatment, horticultural production practices, disinfection treatment and packaging technologies. The importance and implementation of these control measures will be evaluated in collaboration with SMEs and larger industrial partners. Baseline studies on the hazards, intervention technologies and best practices in the fresh produce chain will provide input for both microbial and chemical risk assessment. Results will be used to support risk-based sampling plans, evaluating the risks of newly identified threats as affected by the global trade system and anticipated

The safety of food becomes more of a problem as the breath of supply sources increase from the local, to the national and then the international scale. Procedures developed by this project should help mitigate such problems. It should answer questions concerning the type of monitoring required, the methods to be used and the place where this should take place. Control measures of a managerial and technological nature will be developed in the supply chain of crop production, post-harvest processing and logistics to minimize food safety risks. The assessment of the performance of horticultural safety management systems by a novel diagnostic instrument at EU level exemplified by several countries in Europe and tailored on a global level including major EU trade partners from various climate zones will be developed. The project will establish a discussion forum for stakeholders in the global food chain covering issues of acceptable risk, sustainability of fresh produce production and long term strategy for international food trade, while making no compromise in food safety for European consumers while respecting food sovereignty. Risk communication to increase awareness of trade partners' production systems and uneven consumer behaviour will provide key information for prioritisation of risk management strategies for the producers. It should answer questions concerning the type of monitoring required, the methods to be used and the place where this should take place. It should also alert the various authorities involved to actions that may need to be taken to reduce risks.

KBBE-2009-2-5-01

VEG-I-TRADE



International food trade: Anticipating the impact of climate change on the safety of European and global food markets – SICA

www.veg-i-trade.org

**PROJECT COORDINATOR**

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,997.00

PROJECT N°

244994

DURATION

48 months

PROJECT START DATE

May 2010

LIST OF PARTNERS

1. UNIVERSITEIT GENT (BE)
2. VETERINAERINSTITUTTET - NATIONAL VETERINARY INSTITUTE (NO)
3. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
4. WAGENINGEN UNIVERSITEIT (NL)
5. NORGES VETERNINAERHOGSKOLE (NO)
6. HOGESCHOOL WEST-VLAANDEREN HOWEST (BE)
7. NORSK INSTITUTT FOR VANNFORSKNING (NO)
8. UNIVERSIDADE FEDERAL DO RIO GRANDE DO SUL (BR)
9. INAGRO, PROVINCIAAL EXTERN VERZELFSTANDIGD AGENTSCHAP IN PRIVAATRECHTELIJKE VORM VZW (BE)
10. COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (ZA)
11. UNIVERSITY OF PRETORIA (ZA)
12. ROYAL INTERNATIONAL INSPECTION LABORATORY JSC (EG)
13. ALLGRO NV (BE)
14. SPECIAL FRUIT NV (BE)
15. VAN LAETHEM BVBA (BE)
16. A.L. GARTNERHALLEN (NO)
17. SAT 9855 PRIMAFLO (ES)
18. SCIPROM SARL (CH)
19. TAMIL NADU AGRICULTURAL UNIVERSITY (IN)
20. VEGA MAYOR SL (ES)
21. CONTARIEGO S.L. (ES)
22. FACULTY OF AGRICULTURE - UNIVERSITY OF BELGRADE (RS)
23. ADVANCED BIOLOGICAL TECHNOLOGIES BELGIUM (BE)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-6 European Research Area

FAHRE



Food And Health Research in Europe

FAHRE (Food And Health Research in Europe) aimed to increase the structuring of food and health research and support cooperation towards the European Research Area (ERA). FAHRE addressed food and health research and innovation at European and country level (in 32 European countries). It considered food and health not only from the perspective of the wide ranging and interconnected research themes that comprise this area, but also the related structures and processes associated with food and health research and innovation governance or regulation, research funding, implementation and application of research. In particular, it considered the channels of communication/dialogue between the different actors in the diverse activities in which they are involved since these are especially important for achieving greater coordination of efforts, which can help avoid duplication, increase transparency and maximise the sharing of knowledge. Thus, while the range is European, proposals are equally important for member states within the European Research Area.

There is a 'knowledge gap' on how to influence diets and eating: we need research to help us better understand the behaviours, policies (including regulation) and actions that will effectively change dietary patterns.

The FAHRE project provided several activities to support evidence-based policy making including the Europe 2020 strategy to promote smart, sustainable and inclusive growth, with better products, better services and better quality of life for European citizens and in particular the policy initiatives related to research and innovation such as the Innovation Union, Horizon 2020 and the strengthening of the European Research Area. It provided a comprehensive map of food and health research, and research funding, in 32 European countries, identifying the key players and processes involved in research funding and policy at regional, national, and transnational level. The project also gathered information about the current needs of the research environment in this multidisciplinary area, and identified the gaps and overlaps.

These activities provided the consortium with a unique overview of the current situation, which became the subject of discussion with decision-makers and other stakeholders to develop proposals for ensuring closer cooperation, for improving funding and policies, and for the future direction of food and health research to address the 'knowledge gap' on how to influence unhealthy eating.

KBBE-2009-2-6-01

Enhanced co-operation in food and health with a view to strengthening the European Research Area

FAHRE

www2.spi.pt/fahre


PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,218.00

PROJECT N°

245278

DURATION

28 months

PROJECT START DATE

January 2010

LIST OF PARTNERS

1. SOCIEDADE PORTUGUESA DE INOVACAO - CONSULTADORIA EMPRESARIAL E FOMENTO DA INOVACAO S.A. (PT)
2. EUROQUALITY SARL (FR)
3. UNIVERSITY COLLEGE LONDON (UK)
4. SKALBES (LV)
5. UNIVERSITA DEGLI STUDI DI MILANO (IT)
6. DIALOGIK GEMEINNUETZIGE GESELLSCHAFT FUER KOMMUNIKATIONS- UND KOOPERATIONSFORSCHUNG MBH (DE)
7. SIK - INSTITUTET FOER LIVSMEDEL OCH BIOTEKNIK AB (SE)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-6 European Research Area

FOODCONFERENCE



Food and nutrition in the 21st century

The agri-food industry is one of the most important sectors of EU economy while proper nutrition is essential for health and well being of European citizen. It is estimated that almost 80 % of heart disease, strokes and type 2 diabetes, and 40 % of cancers, could be avoided by proper diet. However, both production of healthy food and promotion of healthy nutrition face serious challenges, like global climate changes and its impact on food security and safety, increasing global food demand, food waste, or high incidence of diet-related diseases and bad dietary habits in most of developed countries. European Union recognizes the importance of these challenges and they had been addressed in several research programmes and strategic documents. However, there is still a need for a throughout discussion of all the aspects of food and nutrition research and policy with major players, like representatives of policy makers, consumers, agriculture, industry and science. Thus, the Polish Technology Platform on Food come up with an initiative to organize a conference "Food and Nutrition in 21st Century" within Polish Presidency in the EU. The main objective of the Conference is to review the most important challenges to European agri-food sector as well as the impact of a diet on health and well-being of European population, in the context of the new European policies. The outcome of the discussion should assist the European Commission in identifying the strategic research needs and their coherence with EU policies in areas linked directly or indirectly to food and nutrition. The Conference should also help to elaborate a common cooperation floor for the existing EU Technological Platforms and research centres active in broadly-defined area of food and nutrition and shall contribute to strengthening the competitiveness of the European science and bio-based economy.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

79,983.00

PROJECT N°

280424

DURATION

12 months

PROJECT START DATE

June 2011

LIST OF PARTNERS

1. INSTYTUT OGRODNICTWA (PL)

ADHOC-2007-13

Food, Agriculture and Fisheries, and
Biotechnology

FOODCONFERENCE

<http://foodconference2011.inhort.pl/>

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-6 European Research Area

FOODSEG



Safe Food for Europe – Coordination of research activities and Dissemination of research results of EC funded research on food safety

The proposed Coordination and support actions (Coordinating, CSA) has the overall objective to disseminate state-of-the-art research results in food safety and quality topics through a series of symposia, expert working group meetings, an online platform with best practise examples and coordination of cooperation and a plan for the preparation of future activities. In addition to the aim of disseminating research results of finalised and current EC funded projects from FP6 and FP7 and other projects focusing on food safety, the consortium will develop strategies and recommendations for European policies (e.g.: food, consumers, research, health, agriculture). The secure handling of food has main impact onto the safety of food products and the European consumers. Furthermore, detailed plans and actions to foster food safety research in Europe are part of the workplan and objectives. The CSA action will pave the way for highly innovative research projects in the field of food safety. FOODSEG will connect research and policy actors in the enlarged European Union and the Candidate countries, in order to fill transitional gaps and achieve a broader network and deeper collaboration between them. The following map gives an overview of the FOODSEG consortium and the very broad network which covers nearly all regions of the enlarged European Union, Candidate countries and also third countries.

PROJECT COORDINATOR

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FUNDING SCHEME CSA**EC CONTRIBUTION** € 999,915.00**PROJECT N°** 266061**DURATION** 36 months**PROJECT START DATE** May 2011**LIST OF PARTNERS**

1. DI ANDREAS MOSER RTD SERVICES -RTDS (AT)
2. VETERINAERMEDIZINISCHE UNIVERSITAET WIEN (AT)
3. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
4. TEAGASC - AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
5. UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II. (IT)
6. VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. (DE)
7. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
8. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
9. ARISTOTELIO PANEPISTIMIO THESSALONIKIS (EL)
10. KØBENHAVNS UNIVERSITET (DK)
11. ISTITUTO SUPERIORE DI SANITA (IT)
12. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
13. FUNDACION GAIKER (ES)
14. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
15. STATENS VETERINAERMEDICINSKA ANSTALT (SE)
16. FREIE UNIVERSITAET BERLIN (DE)
17. CENTMA GMBH (DE)
18. INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU BIOLOGIE SI NUTRIIE ANIMALA (RO)
19. INSTYTUT UPRAWY NAWOZENIA I GLEBOZNAWSTWA, PANSTWOWY INSTYTUT BADAWCZY (PL)
20. VYSKUMNY USTAV POTRAVINARSKY (SK)
21. VYSOKA SKOLA CHEMICKO-TECHNOLOGICKA V PRAZE (CZ)
22. UNIVERSITATEA DUNAREA DE JOS DIN GALATI (RO)
23. UNIVERSITY OF FOOD TECHNOLOGIES (BG)
24. UNIVERZA V LJUBLJANI (SI)
25. LIETUVOS SVEIKATOS MOKSLU UNIVERSITETAS (LT)
26. UNIVERSITY OF ZAGREB-FACULTY OF VETERINARY MEDICINE (HR)
27. INSTITUTE FOR FOOD TECHNOLOGY OF NOVI SAD (RS)
28. BIOMIN HOLDING GMBH (AT)
29. EUROFINS CTC GMBH (DE)
30. NUTRITION SCIENCES NV (BE)
31. COOP ITALIA - SOCIETA' COOPERATIVA (SCARL) (IT)
32. NOFIMA MAT AS (NO)
33. VIEN CONG NGHE SINH HOC VA THUC PHAM (VN)
34. NATIONAL RESEARCH CENTER (EG)

KBBE-2010-2-6-01

FOODSEG



Strengthening cooperation in food safety research in the enlarged European Union

www.foodseg.eu

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-6 European Research Area

HDHL CSA



A Healthy Diet for a Healthy Life - Coordination Action

The overall objective of the CSA is to support the development and the implementation of the Joint Programme Initiative A Healthy Diet for a Healthy Life (HDHL) promoting healthy lifestyles. The CSA will coordinate the activities within the Joint Programming Initiative and support the development of a strategic agenda for harmonised and structured research activities in the area of food, nutrition and health.

Vision

The vision of the JPI on A healthy diet for a healthy life is that in 2030 all Europeans will have the motivation, ability and opportunity to choose a healthy diet from a variety of foods and the incidence of diet-related diseases will have decreased significantly.

Strategy

Joint programming or effective integration of research in the food-, nutritional-, social- and health sciences with enough critical mass will deliver innovative, novel and improved concepts and knowledge that will contribute significantly to the construction of a fully operational European Research Area on the prevention of diet-related diseases and strengthen leadership and competitiveness of the agri-food industry.

Strategic goal

To change dietary patterns based on developments in food-, nutritional-, social- and health sciences and develop new innovative product formats, that will, together with concomitant changes in physical activity, have a major impact on improving public health, increasing the quality of life and prolonging productive life.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

1,996,037.00

PROJECT N°

277673

DURATION

36 months

PROJECT START DATE

May 2011

LIST OF PARTNERS

1. MINISTERIE VAN ECONOMISCHE ZAKEN, LANDBOUW EN INNOVATIE (NL)
2. ZORGONDERZOEK NEDERLAND ZON (NL)
3. FORSCHUNGSZENTRUM JUELICH GMBH (DE)
4. TECHNOLOGICKE CENTRUM AKADEMIE VED CESKE REPUBLIKY (CZ)
5. TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU (TR)
6. INSTITUTO DE SALUD CARLOS III (ES)
7. MINISTERO DELLE POLITICHE AGRICOLE ALIMENTARI E FORESTALI (IT)

JPROG-2011-RTD

HDHL CSA

Coordination action in support of the implementation by participating States of a Joint Programming Initiative on 'A Healthy Diet for a Healthy Life'

<https://www.healthydietforhealthylife.eu/>



ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-6 European Research Area

SUSFOOD



Sustainable Food

The goal of SUSFOOD is to reinforce the scientific cooperation between EU member and associated states in order to maximise the contribution of research to the development of more sustainable food systems:

- responding to the increasing demand for food to be met by increasing production sustainably and reducing losses and waste
- mitigating the impact on the environment
- combating obesity, malnutrition, and under-nutrition
- reducing inequalities between rich and poor individuals and populations
- improving the European agribusiness's competitiveness.

The scope of SUSFOOD encompasses the entire food supply chain with main focus on food chain sustainability beyond the farm gate, taking account of work pre-farm gate developed in other initiatives. It will cover processing, packaging, transport, retailing, food services, storage and consumer activities. It promotes a multi-disciplinary approach, from biology to food engineering, and social sciences.

SUSFOOD will fulfil the following objectives:

- Enhance synergies between research programmes on sustainable food production and consumption
- Increase cooperation between the organisations in order to carry out ambitious research projects
- Maximise assets exploitation by pooling material and intellectual resources in the partners' states
- Promote outputs of the network via dissemination and knowledge transfer activities to the wider community
- Support competitiveness and economic growth, with focus on small and medium enterprises.

The concept of the project is to foster the coordination between the participants' programmes through a need-driven four-step approach:

- Information exchange and mapping to improve mutual acquaintance and share of best practices
- Strategic orientation of research programmes to eliminate overlapping and tackle unaddressed and novel issues
- Joint activities to consolidate and harmonise partnership and outline common vision and agenda
- Calls for proposals to support joint strategic research activities.

KBBE-2011-2-6-02

SUSFOOD



ERA-NET on sustainable food production and consumption

www.susfood-era.net/


PROJECT COORDINATOR

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FUNDING SCHEME CSA

EC CONTRIBUTION € 1,999,320.00

PROJECT N° 291766

DURATION 36 months

PROJECT START DATE

December 2011

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. AGENCE NATIONALE DE LA RECHERCHE (FR)
3. ASSOCIATION DE COORDINATION TECHNIQUE POUR L'INDUSTRIE AGROALIMENTAIRE (FR)
4. BUNDESANSTALT FÜR LANDWIRTSCHAFT UND ERNÄHRUNG (DE)
5. BUNDESMINISTERIUM FÜR ERNÄHRUNG, LANDWIRTSCHAFT UND VERBRAUCHERSCHUTZ (DE)
6. POLLUMAJANDUSMINISTEERIUM (EE)
7. FORSCHUNGSZENTRUM JUELICH GMBH (DE)
8. FORSKNINGS- OG INNOVATIONSSTYRELSEN (DK)
9. FORSKNINGSRÅDET FÖR MILJÖ, AREELLA NÄRINGAR OCH SAMHÄLLSBYGGANDE (SE)
10. INSTITUTO DE FOMENTO DE LA REGION DE MURCIA (ES)
11. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
12. EIGEN VERMOGEN VAN HET INSTITUUT VOOR LANDBOUW EN VISSERIJONDERZOEK (BE)
13. KØBENHAVNS UNIVERSITET (DK)
14. MAA JA ELINTARVIKETALOUDEN TUTKIMUSKESKUS (FI)
15. MINISTRY OF AGRICULTURE AND FORESTRY (FI)
16. MINISTERIE VAN ECONOMISCHE ZAKEN, LANDBOUW EN INNOVATIE (NL)
17. MINISTERO DELLE POLITICHE AGRICOLE ALIMENTARI E FORESTALI (IT)
18. MINISTRSTVO ZA VISOKO SOLSTVO, ZNANOST IN TEHNOLOGIJO (SI)
19. NARODOWE CENTRUM BADAN I ROZWOJU (PL)
20. ELIKA NEKAZARITZAKO ELIKAGAIEN SEGURTASUNARAKO EUSKAL FUNDAZIOA (ES)
21. NORGES FORSKNINGSRAD (NO)
22. MINISTRY OF AGRICULTURE AND RURAL AFFAIRS (TR)
23. THE TECHNOLOGY STRATEGY BOARD (UK)
24. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
25. UNITATEA EXECUTIVA PENTRU FINANTAREA INVATAMANTULUI SUPERIOR, A CERCETARII, DEZVOLTARII SI INOVARII (RO)

ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-7 Coordinated Call with India

FUNCFOOD



Impact of agents with potential use in functional foods on biomarkers for induction of age related diseases

A number of epidemiological studies have consistently demonstrated the protective effects of fruits and vegetables with respect to several age related diseases. The aim of this project is to investigate the protective action of agents with potential use as functional food constituents with respect to cancer, diabetes and cardiovascular disease.

In collaboration between EU and Indian research centers the proposal features a multipronged approach, where the protective action of various non-toxic agents are studied in vitro as well as in rodent models with respect to induction of DNA lesions, tumours and biomarkers for the development of diabetes, diabetic retinopathy and atherosclerosis. In addition, reduced availability of carcinogens and inhibition of their metabolic activation are investigated.

Testing of the protective efficacy of functional food components in intervention cross-over studies in humans exposed to carcinogens, that are normally present at significant levels in the environment, represents an approach that has rarely been resorted to, and will be implemented under this project in Europe as well as in India using sophisticated molecular, cytogenetic and other analytical methods.

Although there has been remarkable progress in our understanding of the processes that lead to neoplasia and diabetes, the mechanisms underlying chemoprevention are, in general, little understood. The results from this project are expected to provide an improved insight with respect to this topic.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

1,497,708.00

PROJECT N°

245030

DURATION

48 months

PROJECT START DATE

February 2010

LIST OF PARTNERS

1. STOCKHOLMS UNIVERSITET (SE)
2. UNIVERSITA DEGLI STUDI DELLA TUSCIA (IT)
3. BIOCHEMISCHES INSTITUT FÜR UMWELTCARCINOGENE PROF. DR. GERNOT GRIMMER STIFTUNG (DE)
4. INSTITUT ZA NUKLEARNE NAUKE VINCA (RS)
5. KAROLINSKA INSTITUTET (SE)

KBBE-2009-2-7-01

Development of functional foods and ingredients

FUNCFOOD

<http://www.gmt.su.se/english/funcfood/main>


ACTIVITY 2.2 - FOOD, HEALTH and WELL-BEING

KBBE-2-2-7 Coordinated Call with India

NAMASTE



New Advances in the integrated Management of food processing waste in India and Europe: use of Sustainable Technologies for the Exploitation of byproducts into new foods and feeds

According to the EU-India Science and Technology Cooperation Agreement, there is a converging Indian and European interest in finding promising valorization routes and markets for fruit and cereal processing by-products and wastes. NAMASTE will develop innovative, comprehensive and industry-relevant approaches for the valorization of citrus, mango and pomegranates by-products and wastes as well as of wheat and rice bran, through the environmentally and economically sustainable conversion of these by-products/wastes into healthy food ingredients, foods and feeds. NAMASTE-EU will particularly focus on citrus and wheat bran processing, and will develop and assess laboratory-scale experimental protocols to convert by-products/wastes into food ingredients and new foods with improved nutritional properties (e.g. fruit paste, citrus filled snacks, citrus-based snacks, fruit enriched breakfast cereals, citrus paste-based self-stable fillers for bakery products, a new citrus/mango based feed for aquaculture). NAMASTE-India will adopt complementary/synergic strategies, technologies and processes for turning by-products/wastes of mango/pomegranate processing and rice bran in similar ingredients, new foods and feeds. A proactive EU-India cooperation effort will be adopted to enhance mutual benefits, in terms of both knowledge generation and market expansion for the global food & drink industry. NAMASTE joint consortia will strictly collaborate on common by-products and shared food technologies as well as on activities aimed at investigating the nutritional quality, chemical and microbial safety of the resulting foods/feeds, and the environmental benefits & economic opportunities associated to industrial production. The direct involvement of strongly committed EU and Indian industries (and of an external Industrial Platform) will provide the high added value of guaranteeing the validation of developed processes and products, thus ensuring fast and effective industrial uptake.

PROJECT COORDINATOR

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- ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)

FUNDING SCHEME

CP

EC CONTRIBUTION €

1,499,995.00

PROJECT N°

245267

DURATION

42 months

PROJECT START DATE

February 2010

LIST OF PARTNERS

1. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
2. INSTITUTE OF FOOD RESEARCH (UK)
3. FUNDACION AZTI/AZTI FUNDAZIOA (ES)
4. CAMPDEN BRI MAGYARORSZAG NONPROFIT KORLATOLT FELELOSSEGU TARSASAG (HU)
5. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
6. GRUPO LECHE PASCUAL (ES)
7. J. RETTENMAIER & SÖHNE GMBH + CO KG (DE)

KBBE-2009-2-7-02

Valorisation of by-products in food processing

NAMASTE

www.ifr.ac.uk/sfc/research/NAMASTE.html




ACTIVITY 2.3 BIOTECHNOLOGIES



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-1-2 Increased sustainability of all productions systems (agriculture, forestry); plant health and crop protection

LOGISTEC



Logistics for Energy Crops' Biomass

Cost-efficient, environmental-friendly and socially sustainable biomass supply chains are urgently needed to achieve the 2020 targets of the Strategic Energy Technologies-Plan of the European Union, which are likely to be impeded by the potential scarcity of lignocellulosic biomass from agriculture. Innovative techniques for crop management, biomass harvesting and pre-treatment, storage and transport offer a prime avenue to increase biomass supply while keeping costs down and minimizing adverse environmental impacts.

The LogistEC project aims at developing new or improved technologies for all steps of the logistics chains, and at assessing their sustainability at supply-area level for small to large-scale bio-based projects. It encompasses all types of lignocellulosic crops: annual and multi-annual crops, perennial grasses, and short-rotation coppice.

Through specific meta-analyses, laboratory tests, field trials, ecosystem modelling and mechanical engineering, the project will deliver recommendations for optimal technologies as well as new equipments and systems. A framework will be developed to integrate chain components and assess their sustainability in terms of environmental, economic and social impacts. It will enable a multi-criteria optimization of the supply chains, making the most of the progresses achieved in the new logistics technologies. The optimization system will be developed and tested in a set of bio-energy and bio-materials case-studies across Europe. Improved logistics will be demonstrated at pilot and industrial scales in 2 regions (Eastern France and Southern Spain) for existing bio-energy and bio-materials value chains. All technology developments will be carried out with industrial partners, to speed up their transfer to market. Project results will be disseminated to the relevant stakeholder groups via scientific and technical conferences, targeted events in connection with the demonstration sites, the project web site and newsletters.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

3,499,390.00

PROJECT N°

311858

DURATION

42 months

PROJECT START DATE

September 2012

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. CENTRO DE INVESTIGACIONES ENERGETICAS, MEDIOAMBIENTALES Y TECNOLOGICAS-CIEMAT (ES)
3. DANMARKS TEKNISKE UNIVERSITET (DK)
4. STICHTING ENERGIEONDERZOEK CENTRUM NEDERLAND (NL)
5. ROTHAMSTED RESEARCH LIMITED (UK)
6. STIFTELSEN SINTEF (NO)
7. SCUOLA SUPERIORE DI STUDI UNIVERSITARI E DI PERFEZIONAMENTO SANT'ANNA (IT)
8. INSTITUT TECHNOLOGIQUE FCBA (FORETCELLULOSE BOIS-CONSTRUCTION AMEUBLEMENT) (FR)
9. FUNDACION CENER-CIEMAT (ES)
10. ACCIONA ENERGIA S.A. (ES)
11. ASSOCIATION EUROPEENNE POUR LA BIOMASSE (BE)
12. COPPICE RESOURCES LTD (UK)
13. SG BIODRYING LTD (UK)
14. NOBILI SPA (IT)
15. CF NIELSEN AS (DK)
16. AVERINOX (NL)
17. MORE OG ROMSDAL BIOBRENSEL AS (NO)
18. MHG SYSTEMS OY - MHGS (FI)
19. SICA BOURGOGNE PELLETS (FR)
20. LOGISTIC BIOTRANS SOCIEDAD LIMITADA (ES)
21. BIOPLOPLAR IBERICA SOCIEDAD LIMITADA (ES)
22. INRA TRANSFERT S.A. (FR)
23. PRZEMYSLOWY INSTYTUT MOTORYZACJI (PL)

FP7-KBBE-2012-6-singlestage

LOGISTEC

Development of new or improved logistics for lignocellulosic biomass harvest, storage and transport

Website not available yet





ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-1-4 Socio-economic research and support to policies

KNOWLEDGE2INNOVATION

Promoting the exploitation of scientific knowledge through academia–industry cooperation in the Knowledge-Based Bio-Economy in Europe and beyond

Knowledge2Innovation aims at stimulating and supporting the knowledge transfer process between academia and industry in Europe, and beyond. The project involves a consortium of 9 participants, experienced in knowledge transfer with complementary skills, covering 8 EU countries.

The project will develop material and tools that can raise awareness for and facilitate knowledge transfer. All material will be made available through the project's own resources and via cooperation with established technology transfer networks and major relevant KBBE stakeholders. The project will proceed in 4 steps:

- (i) Mapping of existing resources, tools, etc., for the support of knowledge transfer, as well as identification and analysis of the specific expectations, needs and problems of researchers and SMEs in the process (study sample: 180 representatives of the agro-food and forestry sectors)
- (ii) Development of a suitable toolkit containing a funding opportunities database, a knowledge communication & marketing tool, a knowledge-potential evaluation tool and a knowledge transfer post evaluation tool. Tools will be refined via a focus group of external experts (EU & non-EU)
- (iii) Development of training material for researchers, SMEs and knowledge transfer professionals covering the benefits of quality management systems for research organisations, the importance of a proof-of-concept stage for the marketability of research, the importance of an IPR strategy in knowledge exploitation, a methodology for evaluating the application potential of knowledge and a set of guidelines for training researchers on knowledge transfer issues
- (iv) Targeted training, deployment of the toolkit and dissemination via: 42 small scale targeted workshops, one-to-one assistance on the use of the toolkit, a website, a major Europe-wide workshop for young researchers & knowledge transfer professionals and close cooperation with major technology transfer networks and European Technology Platforms.

FP7-KBBE-2007-1

KNOWLEDGE-2INNOVATION

Enabling efficient transfer of technology in the knowledge-based bio-economy

www.knowledge2innovation.eu



PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

926,229.00

PROJECT N°

212446

DURATION

39 months

PROJECT START DATE

November 2008

LIST OF PARTNERS

1. ANONYMI ETAIREIA VIOMICHANIKIS EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS TISVIOMICHANIAS TROFIMON - FOOD INDUSTRIAL RESEARCH AND TECHNOLOGICAL DEVELOPMENT COMPANY SA (EL)
2. SYNDESMOS ELLINIKON VIOMICHANION TROFIMON SOMATEIO (EL)
3. AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA (IT)
4. ASOCIACION DE INVESTIGACION DE LA INDUSTRIA AGROALIMENTARIA. (ES)
5. UNIVERSIDAD DE ALICANTE (ES)
6. TARGETING INNOVATION LIMITED (UK)
7. ASSOCIATION DE COORDINATION TECHNIQUE POUR L'INDUSTRIE AGROALIMENTAIRE (FR)
8. TUDOMANYOS ES TECHNOLOGIAI ALAPITVANY (HU)
9. INNO AG (DE)
10. INNOSCANDINAVIA AB (SE)

ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-1-5 The Ocean of Tomorrow

MICRO B3



Marine Microbial Biodiversity, Bioinformatics and Biotechnology

Micro B3 will develop innovative bioinformatic approaches and a legal framework to make large-scale data on marine viral, bacteria; archaeal and protists genomes and metagenomes accessible for marine ecosystems biology and to define new targets for biotechnological applications. Micro B3 will build upon a highly interdisciplinary consortium of 32 academic and industrial partners comprising world-leading experts in bioinformatics, computer science, biology, ecology, oceanography, bioprospecting and biotechnology, as well as legal aspects. Micro B3 is based on a strong user- and data basis from ongoing European sampling campaigns to long-term ecological research sites. For the first time a strong link between oceanographic and molecular microbial research will be established to integrate global marine data with research on microbial biodiversity and functions. The Micro B3 Information System will provide innovative open source software for data-processing, -integration, -visualisation, and -accessibility. Interoperability will be the key for seamless data transfer of sequence and contextual data to public repositories. Micro B3 will allow taking full advantage of current sequencing technologies to efficiently exploit large-scale sequence data in an environmental context. Micro B3 will create integrated knowledge to inform marine ecosystems biology and modelling. Moreover, it will facilitate detecting candidate genes to be explored by targeted laboratory experiments for biotechnology and for assigning potential functions to unknown genes. Micro B3 will develop clear IP agreements for the protection and sustainable use of pre-competitive microbial genetic resources and their exploitation in high potential commercial applications. To underline the translational character of Micro B3, outreach and training activities for diverse stakeholders are planned as well as an Ocean Sampling Day to transparently make project results accessible and gain valuable user feedback.

PROJECT COORDINATOR

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FUNDING SCHEME CP

EC CONTRIBUTION € 8,987,491.00

PROJECT N° 287589

DURATION 48 months

PROJECT START DATE January 2012

LIST OF PARTNERS

1. JACOBS UNIVERSITY BREMEN GMBH (DE)
2. MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. (DE)
3. THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD (UK)
4. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
5. ALFRED-WEGENER-INSTITUT FUER POLAR- UND MEERESFORSCHUNG (DE)
6. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
7. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
8. STAZIONE ZOOLOGICA ANTON DOHRN (IT)
9. MARINE BIOLOGICAL ASSOCIATION OF THE UNITED KINGDOM (UK)
10. VIB (BE)
11. TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU (TR)
12. MARIENE INFORMATIE SERVICE MARIS BV (NL)
13. INTERNATIONAL COUNCIL FOR THE EXPLORATION OF THE SEA (DK)
14. VLAAMS INSTITUUT VOOR DE ZEE VZW (BE)
15. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
16. EUROPEAN MOLECULAR BIOLOGY LABORATORY (DE)
17. COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (FR)
18. UNIVERSITAET BREMEN (DE)
19. RIJKSUNIVERSITEIT GRONINGEN (NL)
20. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
21. BANGOR UNIVERSITY (UK)
22. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
23. UNIVERSITE CATHOLIQUE DE LOUVAIN (BE)
24. COMMISSION INTERNATIONALE POUR L'EXPLORATION SCIENTIFIQUE DE LA MER MEDITERRANEE (CIEM) (MC)
25. UNION INTERNATIONALE POUR LA CONSERVATION DE LA NATURE ET DE SES RESSOURCES (CH)
26. WESNIGK JOHANNA B (DE)
27. MATIS OHF (IS)
28. BIO-ILIBERIS RESEARCH AND DEVELOPMENT (ES)
29. DRUSTVO ZA USLUGI I TRGOVIJA INTERWORKS UVOZ-IZVOZ DOOEL BITOLA (MK)
30. RIBOCON GMBH (DE)
31. BIO-PRODUCT BV (NL)
32. PHARMAMAR, S.A.U. (ES)

FP7-OCEAN-2011

MICRO B3

Marine microbial diversity – new insights into marine ecosystems functioning and its biotechnological potential

www.microb3.eu




ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

3T04

Plant photosynthetic efficiency: from a C3 to a C4 system

Most plants use the C3 pathway of photosynthesis that is compromised by gross inefficiencies in CO₂ fixation. However, some plants use a super-charged photosynthetic mechanism called C4 photosynthesis. The C4 pathway is used by the most productive vegetation and crops on Earth. In addition to faster photosynthesis, C4 plants demand less water and less nitrogen. Overall, our aim is to introduce the characteristics of C4 into C3 crops. This would increase yield, reduce land area needed for cultivation, decrease irrigation, and limit fertiliser applications. If current C3 crops could be converted to use C4 photosynthesis, large economic and environmental benefits would ensue from both their increased productivity and the reduced inputs associated with the C4 pathway. It is important to note that the huge advances in agricultural production associated with the Green Revolution were not associated with increases in photosynthesis, and so its manipulation remains an unexplored target for crop improvement both for food and biomass. Even partial long-term success would have significant economic and environmental benefits. Efficient C4 photosynthesis would be achieved by alterations to leaf development, cell biology and biochemistry. Although initially we will be using model species such as rice and Arabidopsis we envisage rapid transfer of technological advances into mainstream EU crops, such as wheat and rape, that are used both for food and fuel. We will build capacity for C4 research in Europe in this area by the training of future generations of researchers. To achieve this aim we need to increase our understanding of the basic biology underlying the C4 pathway. Our specific objectives will therefore address fundamental aspects of C4 biology that are needed for a full understanding the pathway.

The specific critical aims are to:

1. Identify genes that control elaboration of the bundle sheath (BS) in C3 species.
2. Define the differences in gene expression between mesophyll (M) and BS cells of closely related C3 and C4 plants.
3. Identify the important post-translational modifications that are associated with efficient functioning of the C4 cycle.
4. Increase photosynthesis using a synthetic photorespiratory bypass, and placing elements of C4 photosynthesis into C3 crops.
5. Strengthen the European expertise in 3to4 conversion in order that European scientists retain their pre-eminent position in this field.
6. Harness the new fundamental knowledge generated in the programme to inform support tools on decisions of how to engineer 3to4.
7. Enable the better design of experiments across globe on ways to engineer 3to4.

FP7-KBBE-2011-5

3to4: Converting C3 to C4 photosynthesis for sustainable agriculture

3T04

www.3to4.org



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

6,806,560.00

PROJECT N°

289582

DURATION

60 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. THE UNIVERSITY OF SHEFFIELD (UK)
2. HEINRICH-HEINE-UNIVERSITAET DUESSELDORF (DE)
3. THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE (UK)
4. GOTTFRIED WILHELM LEIBNIZ UNIVERSITAET HANNOVER (DE); SHANGHAI INSTITUTES FOR BIOLOGICAL SCIENCES, CHINESE ACADEMY OF SCIENCES (CN)
5. EESTI MAAILIKOOL (EE)
6. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
7. MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. (DE)
8. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
9. INTERNATIONAL RICE RESEARCH INSTITUTE (PH)
10. THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD (UK)
11. INSTITUTO DE TECNOLOGIA QUIMICA E BIOLOGICA. UNIVERSIDADE NOVA DE LISBOA (PT)
12. INSTITUTO DE BIOLOGIA EXPERIMENTAL E TECNOLOGICA (PT)
13. KAHRAMANMARAS SUTCU IMAM UNIVERSITESI (TR)
14. NEBION AG (CH)
15. ANDREW DAVIS, LIGHTHOUSE DESIGN & MARKETING (UK)
16. STREAM PROJECTS LTD (UK)
17. CHEMTEX ITALIA SRL (IT)
18. BAYER CROPSCIENCE NV (BE)

ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

4F CROPS



Future Crops for Food, Feed, Fiber and Fuel

As different sectors – food, feed, fiber, and fuels – compete for land, the yielding potential of the future non-food crops has to be as efficient as possible in order to minimize the competition for land. The main objective of the proposed 4F CROPS is to survey and analyse all the parameters that will play an important role in successful non-food cropping systems in the agriculture of EU27 alongside the existing food crop systems. The work will start (WP1) with the prediction of the future land use in short term (2020) and long term (2030), taking under consideration restrict factors for agriculture and the market demand for non-food crops. The cropping possibilities (WP2) based on regional potential levels, ecology and climate will be determined. This group of non-food crops will be then subjected to a comparative cost analysis with conventional crops (WP3) for the same time framework. Socio-economic impacts, like farmers' income, rural development, public development, and public acceptance will analyse. Then environmental implications will be assessed compared to their respective conventional products (fossil energy, conversional materials) (WP4). Several environmental impacts will be assessed like soil quality and soil erosion, air quality and climate change, water issues, biodiversity and landscape by using LCA and EIE methods. The regulatory framework of the non-food crops will be considered including existing policies, co-existence and safety measures when the crops used for both food and non-food crops (WP5). The work from WP1 – WP5 will be used for the formation of scenarios for successful non-food cropping alongside food cropping systems (WP6) answering whether a complete bioeconomy is a viable option for EU27. The dissemination (WP7) will be done through the web-site (intranet), the four project workshops and other articles, leaflet, conferences, fact sheets, and links. WP8 aims at the coordination, management and reporting of the project.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

994,382.00

PROJECT N°

212811

DURATION

30 months

PROJECT START DATE

June 2008

LIST OF PARTNERS

1. KENTRO ANANEOSIMON PIGON KE EXIKONOMISIS ENERGEIAS (CENTRE FOR RENEWABLE ENERGY SOURCES AND SAVING) (EL)
2. UNIVERSITA DEGLI STUDI DI CATANIA (IT)
3. AGRICULTURAL UNIVERSITY OF ATHENS (EL)
4. IFEU - INSTITUT FUER ENERGIE - UND UMWELTFORSCHUNG HEIDELBERG GMBH (DE)
5. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
6. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
7. UNIVERSIDADE NOVA DE LISBOA (PT)
8. UNIVERSITATEA DE STIINTI AGRONOMICI SI MEDICINA VETERINARA - BUCURESTI (RO)
9. AGRICULTURAL UNIVERSITY OF ATHENS (EL)
10. NATIONAL AGRICULTURAL RESEARCH FOUNDATION. (EL)
11. INSTITUTE FOR FUELS AND RENEWABLE ENERGY (PL)
12. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
13. INSTYTUT WLOKNIEN NATURALNYCH I ROSLIN ZIELARSKICH (PL)

FP7-KBBE-2007-1

Breeding tools for improved livestock products

4F CROPS

www.4fcrops.eu





ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

AGROCOS

Prospecting for novel plant-produced compounds

The consortium will discover and carry to the stage of development candidates, plant derived small molecules with potential as new cosmetic and agrochemical agents. These compounds will derive from plants originating from major biodiversity hotspots in Europe, Africa, Latin America, and the Asia-Pacific region. The starting point of the project will be a diversity-oriented natural product library of 500 compounds from the existing compound repositories of three project partners. Screening of this compound library in assay panels for agrochemical (antifungal, herbicidal, insecticidal) and cosmetic properties (UV-protection, anti-aging, anti-hyperpigmentation) will rapidly identify promising scaffolds. This knowledge will serve as entry points for a chemotaxonomy and chemodiversity oriented collection of plants which are thought to contain structural variants and decorations of these scaffolds. A liquid library of 3600 extracts will be generated and screened. Stringent prioritization and profiling procedures will generate 300 compounds as focused sub-libraries around the privileged scaffolds. A state-of-the-art technology platform for miniaturized natural product discovery will be used for the purpose. Evaluation of these sub-libraries will lead to 30 compounds which will undergo advanced testing to qualify 5 compounds as development candidates for novel agrochemical and/or cosmetic agents with new or improved properties over existing active ingredients. An additional outcome of the project will be an extract library with a unprecedented level of associated spectroscopic information and metadata, to be used for future purposes. The high-caliber consortium brings together international leaders in small molecule natural products, bioprospection, leading industries in agrochemistry, cosmetics, and spectroscopic data management and analysis.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,903,633.00

PROJECT N°

245336

DURATION

48 months

PROJECT START DATE

April 2010

LIST OF PARTNERS

1. NATIONAL AND KAPODISTRIAN UNIVERSITY OF ATHENS (EL)
2. UNIVERSITAET BASEL (CH)
3. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
4. UNIVERSIDAD DE PANAMA (PA)
5. COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (ZA)
6. BASF SE (DE)
7. KORRES S.A. NATURAL PRODUCTS (KORRES ANONIMI ETERIA FYSIKA PROIONTA) (EL)
8. BRUKER BIOSPIN GMBH (DE)
9. NATIONAL CENTER FOR SCIENTIFIC RESEARCH "DEMOKRITOS" (EL)

FP7-KBBE-2009-3

AGROCOS



From Biodiversity to Chemodiversity:
Novel Plant Produced Compounds with
Agrochemical and Cosmetic interest

www.agrocos.eu



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

AQUATERRE



Biomass supply and impact - Identification of optimal terrestrial and aquatic biomass and waste for Bioproducts

AquaTerrE will promote the cooperation between research centres, business and other stakeholders in Europe devoted to the research, development and application of biomass and biofuel production and valorisation. It will aim integration and unification of efforts and the exchange of knowledge and expertise between partners, to promote the creation of a network for improving biomass and waste reutilisation.

Mainly, AquaTerrE aims to make an inventory of existing biomass feedstocks in Europe and quantify the potential and identify of the best ones. In addition, to study the best possibilities for implementing different biomass sources in different environments to improve their utilisation. Pursuing this target, literature and data survey and current research review will be carried out.

Furthermore, the scope of AquaTerrE consists also in mapping European biomass feedstocks using different tools as Geographical Information Systems (GIS).

Additionally, AquaTerrE expert members will identify economic and environmental impacts schemes to define the optimum Life Cycle Assessment (LCA). LCA is a standardized and structured method for calculating the environmental load of a product, process or activity throughout all its phases. The implementation of a new bio-product/ bio-fuel in the market requires the analysis of economical, social and environmental aspects, with the objective of attaining enough information for the decision making progress. The contribution of a LCA study to this project can be framed in the identification of best sources of biomass feedstock as well as other agricultural waste for the sustainable obtaining of bio-fuels and other added value products.

PROJECT COORDINATOR

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- HASKOLINN A AKUREYRI (IS)

FUNDING SCHEME

CSA

EC CONTRIBUTION €

775,003.00

PROJECT N°

212654

DURATION

24 months

PROJECT START DATE

April 2008

LIST OF PARTNERS

1. HASKOLINN A AKUREYRI (IS)
2. EUROPEAN FOREST INSTITUTE (FI)
3. ENTE PER LE NUOVE TECNOLOGIE, L'ENERGIA E L'AMBIENTE (IT)
4. NORTH WALES MOULDINGS LTD (UK)
5. PROCEDE BIOMASS BV (NL)
6. UNIVERSIDADE DE SANTIAGO DE COMPOSTELA (ES)
7. CENTIV GMBH (DE)
8. LIETUVOS ENERGETIKOS INSTITUTAS (LT)
9. UNIVERSITATEA TEHNICA CLUJ-NAPOCA (RO)
10. AGRICULTURAL UNIVERSITY (BG)
11. DANMARKS TEKNISKE UNIVERSITET (DK)
12. BIOZOOM GMBH (DE)
13. EUROPEAN BIOMASS INDUSTRY ASSOCIATION (BE)
14. UKRAINIAN SCIENTIFIC AND RESEARCH INSTITUTE OF ECOLOGICAL PROBLEMS (UA)
15. HOEGSKOLAN KRISTIANSTAD (SE)
16. CHAMBRE D'AGRICULTURE DU CENTRE (FR)
17. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
18. PLANT SCIENCE SERVICES GMBH (DE)

FP7-KBBE-2007-1

AQUATERRE

Integrated European Network for biomass and waste reutilisation for Bioproducts

www.eubia.org/373.0.html


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

COMOFARM



Development of fermentor-like applications and other plant-based containment systems for molecular farming

The CoMoFarm project will establish high-yielding production systems for pharmaceutical and industrial proteins based on plants, plant tissue and plant cells. The aim is to develop systems in which both the production host and the product itself show consistent yield and quality. The project will include a comparison of four alternative systems – hydroponic plants, root cultures, moss and suspension cells, and will involve the evaluation of different species, strain and process optimization, scale-up, downstream processing, protein characterization and process evaluation in terms of regulatory compliance. As well as furthering the development of an emerging production technology, the project will incorporate numerous innovative elements such as in-process monitoring and automation of environmental parameters to maintain a consistent environment and optimize protein yield and homogeneity, novel downstream processing technologies and innovative bioreactor and hydroponic designs to maintain plant health and ensure production according to good manufacturing practice. This project will have an immense impact on the biopharmaceuticals industry, by allowing SMEs interested in molecular farming to develop plant-made pharmaceuticals without worrying about regulatory constraints or poor investment prospects. This will go a long way to establishing molecular farming as a feasible industry within Europe, and will open new revenue streams for companies currently not interested in (or aware of) molecular farming, e.g. horticulture companies and nurseries. The cost of drugs will also begin to fall, which will positively re-enforce the benefits of plants and lead to greater growth in the market.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,834,797.00

PROJECT N°

227420

DURATION

43 months

PROJECT START DATE

June 2009

LIST OF PARTNERS

1. FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V (DE)
2. ZURCHER HOCHSCHULE FUR ANGEWANDTE WISSENSCHAFTEN (CH)
3. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
4. RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN (DE)
5. ST GEORGE'S HOSPITAL MEDICAL SCHOOL (UK)
6. FORSCHUNGSZENTRUM JUELICH GMBH (DE)
7. GREENOVATION BIOTECH GMBH (DE)
8. DOW AGROSCIENCES LLC (US)
9. ADOLF KUHNER AG (CH)
10. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

FP7-KBBE-2008-2B

COMOFARM

Contained Molecular Farming – Controllable
Contained Systems for High Yield and Consistency

www.comofarm.org


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

CROPS2INDUSTRY



European non-food crops and their industrial application

The ultimate objective is to explore the potential of non-food crops, which can be domestically grown in EU27 context, for selected industrial applications, namely oils, fibers, resins, pharmaceuticals and other specialty products and outline and prioritise crops-to-products schemes, suitable for the different Member States, which will support sustainable, economic viable and competitive European bio-based industry and agriculture.

The proposed project will be carried in 8 WPs.

WP1 will report on non-food crops for selected industrial applications. Information will refer to main physical traits, cultivation areas, inputs, supply and logistics, yields, quality issues. WP2 will identify current molecular genetics technologies and suggest their potential applications in a crop-specific manner to address a wide range of breeding constraints. Improvement of non-food crops will entail breeding for agronomically important traits i.e yield and tolerance to abiotic and biotic conditions.

WP3 will explore the potential and feasibility of the European industry to make high-value biobased products from non-food crop and biotechnological routes. WP4 will perform supply chain cost analysis, identify best business opportunities, and assess the socio-economic impacts of selected crop-to-product schemes at EU-27, regional and country levels.

WP5 will assess selected production and environmental impacts and identify a 'core' list of standards and criteria for the environmental and socio-economic sustainability of selected crops-to-product schemes in a global and country-specific perspective.

WP6 will perform an integrated technical, environmental, and economic assessment to help selecting and prioritising non-food crops. WP7 will address dissemination issues.

The expected output is to identify opportunities for Europe to develop a competitive bio-industry fed by a sustainable agriculture.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

993,345.00

PROJECT N°

227299

DURATION

30 months

PROJECT START DATE

September 2009

LIST OF PARTNERS

1. KENTRO ANANEOSIMON PIGON KE EXIKONOMISIS ENERGEIAS (CENTRE FOR RENEWABLE ENERGY SOURCES AND SAVING) (EL)
2. OEKO-INSTITUT E.V. INSTITUT FUER ANGEWANDTE OEKOLOGIE (DE)
3. CHIMAR HELLAS AE (EL)
4. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
5. FORSCHUNGSZENTRUM JUELICH GMBH (DE)
6. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
7. BIOS AGROSYSTEMS SA (EL)
8. IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE (UK)
9. INSTYTUT WLOKIEK NATURALNYCH I ROSLIN ZIELARSKICH (PL)
10. AGRICULTURAL UNIVERSITY OF ATHENS (EL)
11. KENAF ECO FIBERS ITALIA SPA (IT)
12. INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE CHIMICO-FARMACEUTICA (RO)
13. L'INSTITUT DES CORPS GRAS (FR)
14. HEMPFLAX EXPLOITATIE BV. (NL)
15. INSTYTUT WLOKIEK NATURALNYCH I ROSLIN ZIELARSKICH (PL)

FP7-KBBE-2008-2B

Non-Food Crops-to-Industry schemes in EU27

CROPS2INDUSTRY

www.crops2industry.eu




ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

ENERGYPOPLAR

Energy plants - Novel plants for energy production

Green plants application is being promoted through different European directives, which aim to achieve 5.75% of liquid fuel supply by 2010 and 20% by 2020. Liquid fuels derived from cellulosic biomass offer an important alternative to conventional energy sources to reduce Europe's dependence on fossil fuels. Trees are attractive dedicated energy crops because they display a wide range of growth habits and can be grown on marginal lands unsuited to other agricultural crops including energy grasses, with reduced input costs and optimised land management.

ENERGYPOPLAR is designed to develop domesticated energy poplars having both desirable cell-wall traits and high biomass yield under sustainable low-input conditions to be used as a source of lignocellulosic feedstock for bioethanol.

ENERGYPOPLAR will

- (i) Provide a better understanding of fundamental mechanisms determining optimised yield in Populus
- (ii) Understand mechanisms that regulate the synthesis of cell wall polysaccharides
- (iii) Provide a better understanding of lignocellulosic quality and in a particular the genetic and genomic basis of 'high cellulose' trees linked to alterations in the quality and quantity of lignin
- (iv) Develop high throughput assays for lignocellulosic quality and lignocellulose saccharification potential
- (v) Establish a platform for rapid genes discovery and testing using systems biology approaches to identify novel transcripts for traits of interest
- (vi) Develop a delivery pipeline for improved genotypes for ENERGYPOPLAR trees, with traits of interest and begin the process of commercialisation
- (vii) Establish a tool for environmental sustainability assessments of SRC Populus growing systems
- (viii) Disseminate the results and transfer technology to the energy industry, land-based sector and to appropriate policy makers.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,987,778.00

PROJECT N°

211917

DURATION

54 months

PROJECT START DATE

March 2008

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. SVERIGES LANTBRUKSUNIVERSITET (SE)
3. ALBERT-LUDWIGS-UNIVERSITAET FREIBURG (DE)
4. FLANDERS INTERUNIVERSITY INSTITUTE FOR BIOTECHNOLOGY (BE)
5. UNIVERSITY OF SOUTHAMPTON (UK)
6. ASSOCIAZIONE ISTITUTO DI GENOMICA APPLICATA (IT)
7. GEORG-AUGUST-UNIVERSITAET GOETTINGEN STIFTUNG OEFFENTLICHEN RECHTS (DE)
8. SWETREE TECHNOLOGIES AB (SE)
9. IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE (UK)
10. INRA TRANSFERT S.A. (FR)

FP7-KBBE-2007-1

Enhancing Poplar Traits for Energy Applications

ENERGYPOPLAR

www.energypoplar.eu/



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

EU-PEARLS



Biopolymers - Biological Polymers from plants

Natural rubber is a widely used raw material essential to industry, medicine, transportation and defence, whose major source, the rubber tree *Hevea brasiliensis*, is currently both sustainable and environmentally beneficial. However, increased worldwide demand for natural rubber and latex means that alternative sustainable sources are urgently required. In order to meet this challenge, we propose to create a Network that links all stakeholders involved in the development and sustainable use of *Parthenium argentatum* (guayule) and *Taraxacum koksaghyz* (Russian dandelion) as alternative rubber and latex sources in the EU. To guarantee the sustainable development and exploitation of both crops throughout the value creation chain, the project includes research into the collection and creation of new germplasm, biochemistry and genetics, breeding, agronomy, processing, and product development. The entire rubber biosynthetic pathway will be analysed, and potential bottlenecks will be identified and bypassed through targeted conventional breeding. Genes involved in rubber biosynthesis will be mapped, helping to accelerate breeding strategies in order to generate plants with commercially-viable rubber yields. Such plants will be tested for efficient growth and rubber production in the field under different climatic and edaphic conditions in Europe.

The technical performance and economic potential of rubber extracted from these plants will be evaluated by producing specific prototypes, such as surgical gloves and tires. The envisaged consortium will create a collaborative network of European research organisations and industrial participants, with the necessary scientific and administrative expertise and cross-disciplinary experience to meet the project objectives, and the motivation and determination to produce the deliverables and achieve the project milestones as outlined in the proposal.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,860,116.00

PROJECT N°

212827

DURATION

54 months

PROJECT START DATE

April 2008

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. KEYGENE NV (NL)
3. WESTFAELISCHE WILHELMS-UNIVERSITAET MUENSTER (DE)
4. UNIVERSITE DE LAUSANNE. (CH)
5. BOTANICKY USTAV AVCR (CZ)
6. INSTITUTO VASCO DE INVESTIGACION Y DESARROLLO AGRARIO NEIKER SA (ES)
7. UCHREZHDENIE CENTR EKOLOGICHESKAYA REKONSTRUKTSIYA (KZ)
8. CENTRE DE COOPERATION INTERNATIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
9. APOLLO VREDESTEIN BV (NL)

FP7-KBBE-2007-1

EU-based Production and Exploitation of Alternative Rubber and Latex Sources

EU-PEARLS

www.eu-pearls.eu



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

FIBRA



EU – China Partnering Initiative on fibre crops – Mandatory China

The FIBRA network has as main target to link the research and development activities for fibre crop innovations carried out by universities and institutions in both EU and China. This proposal is set up to promote the communication between experts about the key issues of fibre crop production, processing and application, while attention towards quality and efficiency improvement, and product diversification will result in improved markets and enhanced economic scope for sustainable fibre crop production in EU and China. The creation of opportunities for networking and cooperation between experts from different disciplines from China and EU will result in a better exchange of know-how and is expected to bring the state of the art of fibre crop utilization to a higher level on both sides. The FIBRA network is set up to optimize the information exchange on specialized topics for fibre crop productivity, and innovation. The FIBRA network is to provide the basis for common R&D activities between Chinese and European partners. The FIBRA network will provide a long term vision on future common research activities on fibre crops that will contribute to the international policies of the EU and will improve researchers' training opportunities.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,915.00

PROJECT N°

311965

DURATION

39 months

PROJECT START DATE

September 2012

LIST OF PARTNERS

1. KENTRO ANANEOSIMON PIGON KE EXIKONOMISIS ENERGEIAS (CENTRE FOR RENEWABLE ENERGY SOURCES AND SAVING) (EL)
2. INSTITUTE OF BAST FIBER CROPS, CHINESE ACADEMY OF AGRICULTURAL SCIENCES. IBFC (CN)
3. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
4. CONSIGLIO PER LA RICERCA E SPERIMENTAZIONE IN AGRICOLTURA (IT)
5. WAGENINGEN UNIVERSITEIT (NL)
6. INTERCHANVRE ASSOCIATION (FR)
7. FACULDADE DE CIENCIAS E TECNOLOGIADA UNIVERSIDADE NOVA DE LISBOA (PT)
8. INSTYTUT WLOKIEK NATURALNYCH I ROSLIN ZIELARSKICH (PL)
9. LIETUVOS AGRARINIŲ IR MISKŲ MOKSLUCENTRAS (LT)
10. UNIVERSITA DEGLI STUDI DI CATANIA (IT)
11. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
12. AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA (IT)
13. UNIVERSITA CATTOLICA DEL SACRO CUORE (IT)
14. HEMPFLAX EXPLOITATIE BV. (NL)
15. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
16. NOVA-INSTITUT FÜR POLITISCHE UND ÖKOLOGISCHE INNOVATION GMBH (DE)

FP7-KBBE-2012-6-singlestage

Fiber Crops as a Sustainable Source of Bio-based Materials for Industrial Products in Europe and China

FIBRA

Website not available yet



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

FORBIOPLAST



Forest products - New forest based products and processes

The forest biomass represents an abundant, renewable, no-food competition and low cost resource that can play an alternative role to petro-resources. In spite of positive experimental results industrial production and marketing of materials derived from renewable resources are rarely achieved because of high processing costs and low properties of final products usually targeted to single use sectors devoted to very low costs polymer.

Aims of the present proposal are the differentiate utilizations of forest raw resources or by-products of forest connected industry for the production of eco-compatible foams and composites suitable for many practical applications with particular attention at the packaging, agriculture and automotive sectors.

One topic of the research activity will be focused on the use of wood and paper mill by-products (bark, chips, sawdust, and black liquor) as raw materials for the production of polyurethane foams by an innovative sustainable synthetic process with reduced energy consumption.

Wood fibres can be used as natural fillers to replace synthetic and glass fibres in composites production. Loading of wood fibres is limited by difficult compatibility with hydrophobic polymers. Research activity will be devoted to the production of composites based on wood fibres with biodegradable polymeric matrices (polylactic acid, polycaprolactone, polyhydroxyalkanoates, materbi, etc) and with polypropylene. A high fibres loading content will be achieved by increasing polymeric matrices toughness.

Forest waste valorisation will be achieved by microbiological process.

Materials production will be valued by life cycle assessment and final products will be tested for biodegradation and composting. Composites will be as well evaluated for applications in agriculture, packaging and automotive (textile, panels, interior components). Research activity will be developed in strict cooperation with industries with particular reference to the end users.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

4,317,515.00

PROJECT N°

212239

DURATION

48 months

PROJECT START DATE

July 2008

LIST OF PARTNERS

1. UNIVERSITA DI PISA (IT)
2. BUDAPESTI MUSZAKI ES GAZDASAGTUOMANYI EGYETEM (HU)
3. LATVIJAS VALSTS KOKSNS KIMIJAS INSTITUTS (LV)
4. UNIVERSIDAD DE ALMERIA (ES)
5. FUNDACION CARTIF (ES)
6. UNIVERSITATEA DE STIINTE AGRONOMICE SI MEDICINA VETERINARA BUCURESTI (RO)
7. PEMU MUANYAGIPARI ZARTKORUEN MUKODORESZVENYTARSASAG (HU)
8. CENTRO RICERCHE FIAT SCPA (IT)
9. ORGANIC WASTE SYSTEMS NV (BE)
10. SC RODAX IMPEX SRL (RO)
11. RITOLS (LV)
12. INCERPLAST SA (RO)
13. WIEDEMANN GMBH (DE)
14. NORCONSERV AS (NO)
15. NEOCHIMIKI L.V. LAVRENTIADIS INDUSTRIAL AND COMMERCIAL S.A. (EL)
16. COSMETIC SP (EL)

FP7-KBBE-2007-1

Forest Resource Sustainability through
Bio-Based-Composite Development

FORBIOPLAST

www.forbioplast.eu/

ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

GRASSMARGINS



Perennial grasses: optimising biomass production – SICA

Perennial grasses, which once established can be harvested and re-grow annually for many decades, have a number of other beneficial characteristics which suit them as biomass crops. These include high resource use efficiency, high productivity, good environmental qualities and a wide range of end uses. Environmental benefits include high rates of soil carbon sequestration, enhanced biodiversity and soil stabilisation. Furthermore, perennial grasses naturally colonise marginal areas of land which often impose severe restrictions on the growth of vegetation. Marginal land is defined as land of poor quality for agriculture and which yields poor returns for the farmer. The aim of this project is to identify, characterize and develop novel varieties of C3 grasses (*Dactylis glomerata*, *Festuca arundinacea* and *Phalaris arundinacea*) and the C4 genus *Miscanthus* that show high and stable productivity and require the minimum of additional inputs when grown on different forms of marginal land. In broad terms the work will contribute to overcoming specific bottlenecks along the whole perennial grass-based production chain. In particular it will use modelling to identify the optimal characteristics and geographical distribution of perennial grasses of potential use for biomass production, undertake pre-breeding of novel varieties, investigate stress tolerance and develop drying characteristics following harvest. The consortium assembled to achieve these outputs consists of 12 partners from eight countries representing Northern, Central and Western Europe and partners from Russia and China and involves three SME partners.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,998,623.00

PROJECT N°

289461

DURATION

48 months

PROJECT START DATE

October 2011

LIST OF PARTNERS

1. TEAGASC, AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
2. THE PROVOST, FELLOWS, FOUNDATION SCHOLARS & THE OTHER MEMBERS OF BOARD OF THE COLLEGE OF THE HOLY & UNDIVIDED TRINITY OF QUEEN ELIZABETH NEAR DUBLIN (IE)
3. SVERIGES LANTBRUKSUNIVERSITET (SE)
4. AARHUS UNIVERSITET (DK)
5. TINPLANT BIOTECHNIK UND PFLANZENVERMEHRUNG GMBH (DE)
6. SHANGHAI INSTITUTES FOR BIOLOGICAL SCIENCES, CHINESE ACADEMY OF SCIENCES (CN)
7. THE ESTABLISHMENT OF THE RUSSIAN ACADEMY OF SCIENCES INSTITUTE OF CYTOLOGY AND GENETICS, SIBERIAN BRANCH OF THE RUSSIAN ACADEMY OF SCIENCES (RU)
8. KNOWLEDGE NOW LIMITED (UK)
9. INSTYTUT GENETYKI ROSLIN POLSKIEJ AKADEMI NAUK (PL)
10. DLF, TRIFOLIUM A/S (DK)
11. THE UNIVERSITY OF SHEFFIELD (UK)
12. THE CIRCA GROUP EUROPE LIMITED (IE)

FP7-KBBE-2011-5

GRASSMARGINS

Enhancing biomass production from marginal lands with perennial grasses

www.grassmargins.eu


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

ICON



Green oil - Plants providing oils of the future

Replacing fossil oil with renewable resources is perhaps the most urgent need and the most challenging task that human society faces today. Cracking fossil hydrocarbons and building the desired chemicals with advanced organic chemistry usually requires many times more energy than is contained in the final product. Thus, using plant material in the chemical industry does not only replace the fossil material contained in the final product but also save substantial energy in the processing. Of particular interest are seed oils which show a great variation in their composition between different plant species. Many of the oil qualities found in wild species would be very attractive for the chemical industry if they could be obtained at moderate costs in bulk quantities and with a secure supply. Genetic engineering of vegetable oil qualities in high yielding oil crops could in a relatively short time frame yield such products. This project aims at developing such added value oils in dedicated industrial oil crops mainly in form of various wax esters particularly suited for lubrication. This project brings together the most prominent scientists in plant lipid biotechnology in an unprecedented world-wide effort in order to produce added value oils in industrial oil crops within the time frame of four years as well as develop a tool box of genes and understanding of lipid cellular metabolism in order for rational designing of vast array of industrial oil qualities in oil crops. Since GM technologies that will be used in the project are met with great scepticism in Europe it is crucial that ideas, expectations and results are communicated to the public and that methods, ethics, risks and risk assessment are open for debate. The keywords of our communication strategies will be openness and an understanding of public concerns.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,791,183.00

PROJECT N°

211400

DURATION

60 months

PROJECT START DATE

March 2008

LIST OF PARTNERS

1. SVERIGES LANTBRUKSUNIVERSITET (SE)
2. AXEL CHRISTIERNSSON INTERNATIONAL AKTIEBOLAG (SE)
3. BAYER BIOSCIENCE NV (BE)
4. HUBEI UNIVERSITY (CN)
5. UNIWERSYTET GDANSKI (PL)
6. ROTHAMSTED RESEARCH LIMITED (UK)
7. RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN (DE)
8. GEORG-AUGUST-UNIVERSITAET GOETTINGEN STIFTUNG OEFFENTLICHEN RECHTS (DE)
9. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
10. THE UNIVERSITY OF WARWICK (UK)
11. UNIVERSITY OF ALBERTA (CA)
12. COMMONWEALTH SCIENTIFIC AND INDUSTRIAL RESEARCH ORGANISATION (AU)
13. CARLETON UNIVERSITY (CA)
14. DONALD DANFORD PLANT SCIENCE CENTER (US)
15. UNIVERSITY OF GUELPH (CA)
16. IOWA STATE UNIVERSITY OF SCIENCE AND TECHNOLOGY (US)
17. NATIONAL RESEARCH COUNCIL CANADA (CA)
18. UNIVERSITY OF SASKATCHEWAN (CA)
19. MICHIGAN STATE UNIVERSITY (US)
20. UNITED STATES DEPARTMENT OF AGRICULTURE (US)
21. UNIVERSITY OF BRITISH COLUMBIA (CA)
22. RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITAET BONN (DE)
23. UNIVERSITY OF NEBRASKA (US)
24. INNVENTIA AB (SE)
25. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)

FP7-KBBE-2007-1

ICON

European
CommissionIndustrial Crops producing added
value Oils for Novel chemicals<http://icon.slu.se/ICON/>



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

JATROPT

Jatropha curcas – breeding strategy – towards a sustainable crop for biomaterials and biofuels – SICA (India and/or African ACP and/or Latin America)

Jatropha curcas shows a big promise towards sustainable and affordable biofuels. Several groups are working independently towards development of both agrosystems and high quality germplasm of Jatropha, and downstream processing and biodiesel markets. The challenges are to make the big promises come true: high oil yield, low competition with food crops, use in various agrosystems from monoculture plantations, to mixed cropping and use in hedges around agricultural fields. JATROPT aims at linking high quality research groups and companies that are now operating in different continents in order to achieve a large synergy in research and development of jatropha as a biofuel crop. In five Workpackages (Breeding, Genetic tools, Sustainable Agrosystems, Demonstrating and Dissemination), the following aims are pursued:

- 1) Achieve a world wide germplasm collection of Jatropha curcas, molecularly characterised in order to classify the collection into groups with similar genetic backgrounds; evaluation of elite germplasm of this collection in Asia, Africa and Latin-America; linking segregating population based on parents from different parts of the world and creating a global Jatropha linkage map.
- 2) Develop genetic information and marker tools (genetics of toxic/low toxic trait, branching patterns; disease resistance) to speed up the breeding process.
- 3) Develop agrosystems that yield sustainable and affordable biofuels - and interesting uses of the co-products (biomass/protein residues after oil extraction), with a focus on Pro Poor development and on designing systems in which competition for food and fuel can be minimised;
- 4) Demonstration of the potential of local/regional use of produced biofuels to increase agricultural and general economic productivity will be investigated.
- 5) Achieve dissemination of knowledge on quality of germplasm, on genetics and sustainable agrosystems setting up distribution of combined packages of agronomic guidelines and germplasm.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,995,739.00

PROJECT N°

245236

DURATION

48 months

PROJECT START DATE

January 2010

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. EMPRESA BRASILEIRA DE PESQUISA AGROPECUARIA (BR)
3. UNIVERSITY OF YORK (UK)
4. BIOCOMBUSTIBLES DE GUATEMALA SOCIEDAD ANONIMA (GT)
5. BIONOR TRANSFORMACION SA (ES)
6. CENTRE DE COOPERATION INTERNACIONAL EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
7. QUINVITA PLANT SCIENCE LIMITED (UK)
8. UNIVERSIDAD SAN CARLOS DE GUATEMALA (GT)
9. CENTRE NATIONAL DE LA RECHERCHE APPLIQUEE AU DEVELOPPEMENT RURAL (MG)
10. KEYGENE NV (NL)
11. TAMIL NADU AGRICULTURAL UNIVERSITY (IN)
12. UNIVERSIDAD AUTONOMA DE CHAPINGO (MX)

FP7-KBBE-2009-3

JATROPT

Jatropha curcas Applied and Technological Research on Plant Traits

www.jatropt.eu



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

METAPRO



Optimisation of secondary metabolite production in plants: localisation, transport, storage and stability

In the METAPRO project we aim to optimise the production of several useful isoprenoid derived secondary metabolites to demonstrate the tools and strategies developed for the generic production of useful secondary metabolites in plants. Astaxanthin (ketocarotenoids) and the apocarotenoid crocin have been selected to demonstrate the application of the technologies adopted and developed. These compounds are of high-value and used in the industrial and health sectors. Both are classical secondary plant metabolites being formed in slow growing species that are not readily amenable to agricultural production. They are non-essential to the plant, synthesised at a defined developmental stage, in specialised tissues, cells and/or cellular compartments. In order to generate cheap renewable bio-resources of these compounds with improved economic and environmental potential, natural variation will be exploited and genetic engineering approaches implemented. Astaxanthin and crocin will be engineered into Solanaceae host platforms. Tomato fruit and potato tuber are ideal cell factories for this class of molecules, as at defined developmental stages their tissues and specialised cellular compartments are pre-disposed to high level isoprenoid formation. To optimise production in these hosts the METAPRO project aims to use modern and emerging technologies to (i) elucidate regulatory mechanisms involved in synthesis, (ii) optimise storage by increasing, altering and transport from, the cellular compartment responsible for synthesis and accumulation, (iii) improve stability of the products in the cell and during bioprocessing and (iv) implement improved transformation, transcription and translation tools for more efficient engineering and improved yields and quality. To achieve these objectives and deliver scientific excellence with impact a multidisciplinary pan-European team with complementary expertise, industrial (SME) participation and global interaction has been constructed.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,981,469.00

PROJECT N°

244348

DURATION

42 months

PROJECT START DATE

December 2009

LIST OF PARTNERS

1. ROYAL HOLLOWAY AND BEDFORD NEW COLLEGE (UK)
2. MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. (DE)
3. AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE, L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE (IT)
4. SCOTTISH CROP RESEARCH INSTITUTE (UK)
5. THE HEBREW UNIVERSITY OF JERUSALEM (IL)
6. ALBERT-LUDWIGS-UNIVERSITAET FREIBURG (DE)
7. METAPONTUM AGROBIOS S.R.L. (IT)
8. PROPLANTA SRL (RO)

FP7-KBBE-2009-3

METAPRO

The development of tools and effective strategies for the optimisation of useful secondary METAbolite PROduction in planta

www.isoprenoid.com




ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

MULTIBIOPRO

Multipurpose crops for industrial bioproducts and biomass

The overall strategic objective of MultiBioPro is to exploit natural resources from genetic varieties of two industry-utilized plant species, poplar and the tobacco tree *Nicotiana glauca*, for direct applicability to novel industrial end products. The consortium will explore already existing poplar and *N. glauca* genotypes in parallel with innovative state-of-the-art translational research from the model organism *Arabidopsis* to genetically engineer metabolic pathways to advance qualities of wood fibers, and long-chain fatty acids. The modulation of fiber and long-chain fatty acid quality in both poplar and *N. glauca* will be examined through a multidisciplinary analytical platform that will optimize for key industrial values. An extensive cross-talk between the analytical platforms, biorefining and field trials will provide the basis for industrial determination of *N. glauca* and poplar varieties as new multi-purpose feedstocks. Importantly, residual biomass, e.g. suberin in poplar bark, that normally is considered waste products will also be analysed for its potential to yield long-chain fatty acids with important characteristics for new bio-materials and for biorefinery purposes. Both poplar and *N. glauca* may readily be grown in areas that are sub-optimal for food crop-species, and field-trials within the MultiBioPro project will further evaluate the environmental sustainability of the obtained poplar and *N. glauca* genotypes. Attributes that are advancing biorefinery and bio-material properties will be further exploited for marketing, demonstrating the industry-driven nature of the MultiBioPro consortium. Dissemination and training events will constitute an integral part of the project, and will include training modules in using different analytical platforms, industry-lead product-developing courses, management training and communication through the development of corporate and scientific dissemination toolkits.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,770,922.00

PROJECT N°

311804

DURATION

48 months

PROJECT START DATE

October 2012

LIST OF PARTNERS

1. MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. (DE)
2. ROYAL HOLLOWAY AND BEDFORD NEW COLLEGE (UK)
3. KUNGLIGA TEKNISKA HOEGSKOLAN (SE)
4. EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH (CH)
5. VIB (BE)
6. EUROPEAN RESEARCH AND PROJECT OFFICE GMBH (DE)
7. ABBA GAIA S.L. (ES)
8. PILOT PFLANZENOLTECHNOLOGIE MAGDEBURG EV (DE)
9. GREEN FUELS LTD (UK)
10. NEUTRAL CONSULTING LIMITED (UK)
11. CAPAX ENVIRONMENTAL SERVICES BVBA (BE)

FP7-KBBE-2012-6-singlestage

MULTIBIOPRO



The development and evaluation of Multipurpose crops as new biorefining feedstocks for the production of industrial BioProducts and biomass

Website not available yet



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

MULTIHEMP



Multipurpose crops for industrial bioproducts and biomass

Hemp is a sustainable high yielding crop well adapted to most European conditions, with advantageous environmental and agronomical characteristics. Traditionally cultivated for the fibres, seeds and psychoactive substances, it is now considered an ideal crop to produce innovative biomaterials. Once a key industrial crop for fibre, hemp production declined in the last century and was displaced by cotton and synthetic fibres. This explains why hemp has not been subject to the intensive breeding that has driven great improvements in major food crops in the last 50 years. However, cotton has one of the worst environmental footprints of any crop and there is renewed interest in hemp because it requires less water and agrochemicals and provides fibre and oil of superior quality. In the frame of multi-hemp, we will use cutting-edge genomic approaches to achieve rapid targeted improvements in hemp productivity and raw material quality for end-user requirements, whilst also advancing scientific understanding of gene-to-trait relationships in this crop. This work will be combined with innovations in agronomy, harvesting and processing methods to generate sustainable products from improved varieties. The project will include demonstration activities such as field trial and process scale up. The economic and environmental implications of each innovation will be assessed so as to maximise economic return and increase sustainability. This project brings together leading research groups with a vibrant group of industrial participants working from the level of molecular genetics through to end product demonstration. Our ambition is to develop an integrated hemp-based biorefinery in which improved feedstock is subject to efficient and modular processing steps to provide fibre, oil, construction materials, fine chemicals and biofuels using all components of the harvested biomass, and generating new opportunities within the developing knowledge based bioeconomy.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,999.00

PROJECT N°

311849

DURATION

54 months

PROJECT START DATE

September 2012

LIST OF PARTNERS

1. UNIVERSITA CATTOLICA DEL SACRO CUORE (IT)
2. WAGENINGEN UNIVERSITEIT (NL)
3. UNIVERSITY OF YORK (UK)
4. HOCHSCHULE BREMEN (DE)
5. LEIBNIZ-INSTITUT FUER AGRARTECHNIK POTSDAM-BORNIM EV (ATB) (DE)
6. CONSIGLIO PER LA RICERCA E SPERIMENTAZIONE IN AGRICOLTURA (IT)
7. AALTO-KORKEAKOULUSAATIO (FI)
8. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
9. FEDERATION NATIONALE CHANVRE ASSOCIATION*FNPC (FR)
10. VANDIJK SEMO BV (NL)
11. LATGALES LAUKSAIMNIECIBAS ZINATNESCENTRS SIA (LV)
12. GRUPPO FIBRANOVA SRL (IT)
13. C.M.F. TECHNOLOGY SPA (IT)
14. VENTIMOLA GMBH & CO DAMMTECHNIK KG (DE)
15. MONTAZNA GRADNJA TADEJ ZIMIC SP (SI)
16. ASOCIACION EMPRESARIAL DE INVESTIGACION CENTRO TECNOLOGICO NACIONAL AGROALIMENTARIO EXTREMADURA (ES)
17. NOVA-INSTITUT FUR POLITISCHE UND OKOLOGISCHE INNOVATION GMBH (DE)
18. AGRITEC, VYZKUM, SLECHTENI A SLUZBY S.R.O. (CZ)
19. HENNEPVERWERKINGSBEDRIJF DUN AGRO BV (NL)
20. PLANETE CHANVRE SAS (FR)
21. KRANEMANN GMBH (DE)
22. INSTITUTE OF BAST FIBER CROPS, CHINESE ACADEMY OF AGRICULTURAL SCIENCES. IBFC (CN)

FP7-KBBE-2012-6-singlestage

MULTIHEMP

Multipurpose hemp for industrial bioproducts and biomass

Website not available yet



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

OPTIMA



Perennial grasses: optimising biomass production – SICA

OPTIMA will integrate an ambitious biology system approach for perennial grasses such as switchgrass, miscanthus and giant reed in the Mediterranean environment. Moreover the perennial species cardoon, which has been proven to be particularly adapted to the Mediterranean climate, will be used as a control species.

The main objective of the OPTIMA project is to identify high-yielding perennial grasses for the Mediterranean area, within optimized production chain that will provide stable source for both biomass and new plant derived bio-products. OPTIMA will explore the potentialities of perennial grasses on underutilized or abandoned marginal lands.

An interdisciplinary approach involving physiology, biotechnology, and agronomy, socio-economical and environmental analysis at different scale levels will be undertaken with the aim at tackling specific bottlenecks of perennial grasses in the Mediterranean area and to create alternative end-use chains. OPTIMA approach has been to link the research proposed here by including industrial end-users in the project. This should allow the output of this research to develop in a commercial context as rapidly as possible the new findings.

The major goals of this multidisciplinary network are to evaluate the existing genotypes; to characterize and deliver novel species; to deliver sustainable crop management practices (sowing/planting strategies to reduce the use of pesticide and increase biomass on the first year establishment, cultivation under salinity conditions and/or water deficit, reducing losses during harvest); to evaluate the industrial production of bioenergy and added value bio-products; to assess the environmental impact through an integrated assessment of sustainability criteria, to disseminate the achieved findings at different level (local, regional, national, international).

FP7-KBBE-2011-5

OPTIMA

Optimization of Perennial Grasses
for Biomass Production

www.optimafp7.eu



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,998,319.00

PROJECT N°

289642

DURATION

48 months

PROJECT START DATE

October 2011

LIST OF PARTNERS

1. UNIVERSITA DEGLI STUDI DI CATANIA (IT)
2. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
3. KENTRO ANANEOSIMON PIGON KE EXIKONOMISIS ENERGEIAS (CENTRE FOR RENEWABLE ENERGY SOURCES AND SAVING) (EL)
4. FACULDADE DE CIENCIAS E TECNOLOGIADA UNIVERSIDADE NOVA DE LISBOA (PT)
5. UNIVERSIDAD POLITECNICA DE MADRID (ES)
6. IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE (UK)
7. AGRICULTURAL UNIVERSITY OF ATHENS (EL)
8. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
9. UNIVERSITAT DE LES ILLES BALEARS (ES)
10. UNIVERSITAT DE BARCELONA (ES)
11. ABERYSTWYTH UNIVERSITY (UK)
12. UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN (IE)
13. INDIAN INSTITUTE OF TECHNOLOGY DELHI (IN)
14. HUAZHONG AGRICULTURAL UNIVERSITY (CN)
15. CONSIGLIO PER LA RICERCA E SPERIMENTAZIONE IN AGRICOLTURA (IT)
16. IFEU. INSTITUT FUER ENERGIE- UND UMWELTFORSCHUNG HEIDELBERG GMBH (DE)
17. INSTITUTO DE AGROBIOTECNOLOGIA ROSARIO S.A. (AR)
18. B.T.G. BIOMASS TECHNOLOGY GROUP BV (NL)
19. SPAPPERI S.R.L. (IT)
20. PRIMUS TALALMANYHASZNOSITO, TERMELO, KERESKEDelmi ES SZOLGALTATO KORLATOLT FELELOSSEGU TARSASAG (HU)
21. TUZETKA (BE)

ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

OPTIMISC



Perennial grasses: optimising biomass production – SICA

Miscanthus is a C4 perennial rhizomatous grass that has become a leading candidate crop for production of lignocellulosic feedstocks due to its rapid biomass accumulation in temperate climates. There is currently a single commercial clone, *M. x giganteus*, which has a number of limitations. Research over the past 20 years has shown that a few key species and their interspecific hybrids have a high yield potential whilst requiring low inputs. The overall objective of this project is to optimize the miscanthus bioenergy and bioproduct chain by: trialling elite germplasm types over a range of sites across Europe, Ukraine and Russia; analysing the key traits that currently limit the potential of miscanthus; identifying high-value bioproducts; and modelling the combined results to provide recommendations to policy makers, growers and industry. The outcomes of the project will include screened germplasm and knowledge which will provide solutions to key existing bottlenecks. The specific topics tackled in the field and controlled environment trials are (1) dissection of the traits underpinning tolerance to the abiotic stresses drought, salinity, cold and freezing, (2) yield and quality in a wide range of environments, taking into consideration traits such as senescence, nutrient recycling and nutrient-use efficiency, (3) process-ability of biomass to convenient fuel formats and added-value products. Data gathered will be integrated through the development of modelling parameters needed to build up life-cycle analysis models and other decision support tools to identify optimum production scenarios in the EU, Ukraine and Russia. Recommendations will be provided to miscanthus developers on appropriate genotype selection, propagation and processing methods to maximize the environmental, economic and social benefits. The development of the full potential of miscanthus through OPTIMISC will contribute to Europe's transition to a sustainable biobased economy.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,997,576.00

PROJECT N°

289159

DURATION

54 months

PROJECT START DATE

October 2011

LIST OF PARTNERS

1. UNIVERSITAET HOHENHEIM (DE)
2. ABERYSTWYTH UNIVERSITY (UK)
3. WAGENINGEN UNIVERSITEIT (NL)
4. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
5. VLAAMS GEWEST (BE)
6. BLANKNEY ESTATES LIMITED (UK)
7. SCHWARZ KAI-UWE WOLFGANG (DE)
8. ANNA. AGENTUR FUR NACHHALTIGE NUTZUNG VON AGRARLANDSCHAFTEN, PARTNERSCHAFT MULLER-SAMANN & HOLSCHER INGENIEURE (DE)
9. DONGYING AGRICULTURAL INSTITUTE (CN)
10. UNIVERSITY OF CUKUROVA (TR)
11. FEDERAL STATE EDUCATIONAL ESTABLISHMENT OF HIGHER PROFESSIONAL EDUCATION RUSSIAN STATE AGRARIAN UNIVERSITY-MOSCOW TIMIRYAZEV AGRICULTURAL ACADEMY (RU)
12. GERMAN AGRARIAN CENTRE (UA)

FP7-KBBE-2011-5

Optimizing Miscanthus Biomass Production

OPTIMISC

<https://optimisc.uni-hohenheim.de>



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

PLAPROVA

Plant-produced vaccines - SICA (Russia)

Advances in the technologies for expressing proteins and extracting them from plants have allowed several plant-made products to be assessed for safety and efficacy. The results have been favourable and have culminated in the demonstration that plant-produced vaccine can protect target animals against challenge. However, most of these successes have concerned the production of antigens which had previously been produced using established methods such as mammalian cell culture. For plants to fulfil their potential as a means of producing vaccines, it is now imperative that methods are developed for the rapid production and characterisation of a large number of vaccine candidates. This project will exploit recent developments in transient expression technologies to screen a range of vaccine candidates in plants. These methods can produce milligram quantities of candidate proteins in a matter of days using only small amounts (tens of grams) of plant tissue. The project will concentrate on screening vaccine candidate proteins which are capable of forming virus-like particles (VLPs), as such particulate structures are known to be potent stimulators of the immune system. Furthermore, they can be used as carriers of additional immunogenic sequences for the developments of novel vaccines. The project will focus on diseases which are particularly relevant to both the EU and Russia, including Avian Influenza virus (AIV), Blue Tongue Virus (BTV) Porcine Respiratory and Reproductive Syndrome Virus (PRRSV). The ability to screen many candidate VLPs will result in the development of novel vaccines against these and other important pathogens. At the same time as the screening is carried out, methods will be developed to allow the rapid translation of the information gained through the transient studies into larger scale production systems for the most promising candidates. This will enable low cost vaccines to be developed for use for livestock and, ultimately, humans.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

1,998,354.00

PROJECT N°

227056

DURATION

36 months

PROJECT START DATE

January 2009

LIST OF PARTNERS

1. JOHN INNES CENTRE (UK)
2. SCOTTISH CROP RESEARCH INSTITUTE (UK)
3. WAGENINGEN UNIVERSITEIT (NL)
4. CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
5. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
6. UNIVERSITY OF PLOVDIV (BG)
7. UNIVERSITY OF CAPE TOWN (ZA)
8. CENTRE BIOENGINEERING OF THE RUSSIAN ACADEMY OF SCIENCES (RU)
9. M.V. LOMONOSOV MOSCOW STATE UNIVERSITY (RU)
10. RESEARCH INSTITUTE OF INFLUENZA OF RUSSIAN ACADEMY OF MEDICAL SCIENCE (RU)
11. FGI FEDERAL CENTRE FOR ANIMAL HEALTH (RU)

FP7-KBBE-2008-2B

Plant Production of Vaccines

PLAPROVA

www.plaprova.eu



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

RENEWALL



Plant cell walls - Understanding Plant Cell Walls for optimizing Biomass potential

With oil reserves diminishing and the effects of industrial emissions on global climate, there is a need for renewable carbon-neutral industrial feedstocks. First generation biorefineries, producing biofuels and bioplastics by the fermentation of sugar or starch, are seeing a rapid expansion and are adding stress to food supplies. A more sustainable option is to use plant biomass from agricultural by-products, or dedicated biomass crops. Plant biomass is underutilized, abundant and composed mostly of cell wall polysaccharides. Conversion of these polysaccharides to sugars will provide cheap and abundant raw materials for industrial biotechnology. The use of plant biomass in this way is hampered by the high cost of saccharification due to the recalcitrance of cell walls to enzymatic hydrolysis. RENEWALL aims to find ways to overcome this technical bottleneck by identifying and modifying the structural features of plant cell walls that make them difficult to process. Our partnership brings together outstanding biologists, chemists, and enzymologists, as well as industrialists from the plant breeding and biotechnology sectors, from Europe and the USA who can together take an integrated multidisciplinary approach to solving this fundamental problem. Combining genomics, transcriptomics, proteomics, and systems approaches, we will achieve a step-change in our understanding of the biosynthesis of the major components of plant biomass, namely; lignin, cellulose and matrix polysaccharides. Using state-of-the-art and novel analytical methods we will determine the basis of the recalcitrance of plant biomass to saccharification. Combining these approaches, we will identify new genes that can be manipulated to improve the ease and yield of biomass saccharification and will generate rational approaches for improving the quality of plant biomass as an industrial feedstock.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,744,122.00

PROJECT N°

211982

DURATION

48 months

PROJECT START DATE

August 2008

LIST OF PARTNERS

1. UNIVERSITY OF YORK (UK)
2. UNIVERSITY OF DUNDEE (UK)
3. KØBENHAVNS UNIVERSITET (DK)
4. KUNGLIGA TEKNISKA HØGSKOLAN (SE)
5. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
6. UNIVERSITY OF NEWCASTLE UPON TYNE (UK)
7. UNIVERSITE PAUL SABATIER TOULOUSE III (FR)
8. THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE (UK)
9. THE UNIVERSITY OF MANCHESTER (UK)
10. SVERIGES LANTBRUKSUNIVERSITET (SE)
11. VIB (BE)
12. KWS SAAT AG (DE)
13. SWETREE TECHNOLOGIES AB (SE)
14. DLF TRIFOLIUM A/S (DK)
15. CORNELL UNIVERSITY (US)

FP7-KBBE-2007-1

RENEWALL

Improving Plant Cell Walls for Use as a Renewable Industrial Feedstock

www.renewall.eu




ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

SMARTCELL

Green factory – The expression and accumulation of valuable industrial compounds in plants

Plants sustainably produce low levels of secondary metabolites of high industrial value. However, they are often too complex to be economically manufactured by chemical synthesis. Advanced metabolic engineering and exploitation of plants as Green Factories has been prevented due to poorly understood metabolic pathways in plants and the regulation thereof. SmartCell brings together 14 leading European academic laboratories and five industrial partners in order to create a novel concept for rationally engineering plants towards improved economical production of high-value compounds for non-food industrial use. Although SmartCell focuses on terpenoids, the largest class of secondary metabolites, which exhibit extremely diverse biological and pharmaceutical activities, all knowledge, tools and resources developed in the project, are generic and broadly applicable to engineer any plant biosynthetic pathway. A systems biology approach using metabolomics and transcriptomics is taken to move beyond the state of the art. New multigene transfer technologies are developed. By screening and functionally categorizing genes at structural, regulatory and transport levels a comprehensive knowledge base of how secondary metabolite biosynthetic pathways operate in plants is developed. The case study component i.e. manufacturing a valuable terpenoid in an optimized large-scale system gives SmartCell a unique opportunity to directly make transition from fundamental science to application. For long-term exploitation an integrated database, compound library, cell culture collection and a genebank available for academic and industrial communities will be established. SmartCell provides new opportunities for SMEs and established European biotech companies, and the technology can also be transferred to other e.g. fine chemical and pharmaceutical industries. SmartCell will prove that plant-based resources can furnish the European society and industry far more than they presently do.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,901,866.00

PROJECT N°

222716-2

DURATION

48 months

PROJECT START DATE

January 2009

LIST OF PARTNERS

1. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
2. VIB (BE)
3. UNIVERSITEIT LEIDEN (NL)
4. UNIVERSIDAD DE LLEIDA (ES)
5. FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V. (DE)
6. UNIVERSITAET ZUERICH (CH)
7. UNIVERSITE CATHOLIQUE DE LOUVAIN (BE)
8. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS) (FR)
9. ZÜRCHER HOCHSCHULE FÜR ANGEWANDTE WISSENSCHAFTEN (CH)
10. JOHN INNES CENTRE (UK)
11. KØBENHAVNS UNIVERSITET (DK)
12. MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. (DE)
13. THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF OXFORD (UK)
14. WAGENINGEN UNIVERSITEIT (NL)
15. PLANT ADVANCED TECHNOLOGIES (FR)
16. SOLUCEL OY (FI)
17. PHILIP MORRIS PRODUCTS S.A. (CH)
18. INSTITUT DE RECHERCHE PIERRE FABRESAS (FR)

FP7-KBBE-2007-2A

SMARTCELL

Rational design of plant systems for sustainable generation of value-added industrial products

www.smart-cell.org



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

SWEETFUEL



Sweet sorghum – An alternative energy crop for biofuel production in semi-arid and temperate regions – SICA (Latin America, South Africa, India)

Increasing world market prices for fossil fuels, driven by limited reserves, growing demand and instability in producing regions, now render renewable fuels economical. Such fuels are also a pathway to reducing GHG emissions and mitigating climate change. Bio-ethanol from crop plants is a promising, partial solution to sustainably satisfy the energy demand for road transport while respecting food security. The success of bio-ethanol from sugarcane in Brazil demonstrates proof of concept but cannot be transferred to water-limited or temperate environments. Sweet sorghum, as a source of either fermentable free sugars or lignocellulosics, has many potential advantages, including: high water, nitrogen and radiation use efficiency; broad agro-ecological adaptation; rich genetic diversity for useful traits; and the potential to produce fuel feedstock, food and feed in various combinations. Fuel-food crops can thereby help reconciling energy and food security issues. This project will breed for improved cultivars and hybrids of sorghum for temperate, tropical semi-arid and tropical acid-soil environments by pyramiding in various combinations, depending on region and ideotype, tolerance to cold, drought and acid (Al-toxic) soils; and high production of stalk sugars, easily digestible biomass and grain (WP 1-3). Molecular-genetic and physiological breeding support is given by WP4, and agro-ecological adaptation and sustainable practices are developed by WP5. Other WPs (6, 7, 8) provide for integrated technology and impact assessments including economics, dissemination and coordination. The Consortium is composed of 10 members from France (leader), Italy, Germany, Brazil, India, Mexico and South Africa, including a seed company. Research involves structured participation of stake holders, including policy makers. Project outcomes will be new germplasm, sustainable practices and commodity chain concepts adapted to each target region. The duration of the project is 5 years.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,967,975.00

PROJECT N°

227422

DURATION

60 months

PROJECT START DATE

January 2009

LIST OF PARTNERS

1. CENTRE DE COOPERATION INTERNATIONALE EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
2. INTERNATIONAL CROPS RESEARCH INSTITUTE FOR THE SEMI-ARID TROPICS (IN)
3. EMPRESA BRASILEIRA DE PESQUISA AGROPECUARIA (BR)
4. KWS SAAT AG (DE)
5. IFEU. INSTITUT FUER ENERGIE UND UMWELTFORSCHUNG HEIDELBERG GMBH (DE)
6. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
7. UNIVERSITA CATTOLICA DEL SACRO CUORE (IT)
8. AGRICULTURAL RESEARCH COUNCIL (ARC) (ZA)
9. UNIVERSIDAD AUTONOMA DE NUEVO LEON (MX)
10. WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG (DE)

FP7-KBBE-2008-2B

Sweet Sorghum : an alternative energy crop

SWEETFUEL

www.sweetfuel-project.eu

ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

TERPMED



Plant natural products - Alternative sources for the synthesis of bioactive or industrial added value products

Plant secondary metabolites are an important source of therapeutic drugs or drug leads. The advent of genomic and metabolomic technologies has now made it possible to bring the field of plant natural products into the 21st century and replace serendipitous and haphazard finding by rational design and discovery. This proposal is devoted to plant terpenes, the largest and most diverse group of plant natural products. TERPMED will focus on sesquiterpene lactones and phenolic diterpenes because of the presence of distinct functional groups and their high potential as novel human drugs for treating cancer and neurological disorders.

By using a combination of comparative metabolomics and genomics, significant advances will be achieved in the understanding of the biosynthetic pathways of these compounds. Focusing on specific functional groups such as γ -butyrolactones and phenolics amongst the terpenes will allow the development of high-throughput analytical methodologies to detect, purify and characterize compounds bearing these groups. A comprehensive library of these compounds within a subset of plant biodiversity will be established. The compounds isolated will be tested for biological activity and the most active molecules will be selected. High throughput cDNA sequencing coupled to the comparative analysis of the metabolic profiles of targeted species will be achieved for the elucidation of the biosynthetic pathways of these compounds. Innovative production platforms using plant secretory organs such as the trichomes will be tested for the pilot production of the most promising compounds identified and the production of novel compounds by combinatorial biosynthesis.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,694,418.00

PROJECT N°

227448

DURATION

48 months

PROJECT START DATE

June 2009

LIST OF PARTNERS

1. UNIVERSITAT DE BARCELONA (ES)
2. WAGENINGEN UNIVERSITEIT (NL)
3. PRISMA B.V. (NL)
4. INSTITUT ZA BIOLOSKA ISTRAZIVANJA (RS)
5. ARISTOTELIO PANEPISTIMIO THESSALONIKIS (EL)
6. UNIVERSITY OF WISCONSIN-MADISON (US)
7. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
8. LEIBNIZ-INSTITUT FÜR PFLANZENBIOCHEMIE (DE)

FP7-KBBE-2008-2B

TERPMED



Plant Terpenoids for Human Health:
a chemical and genomic approach to
identify and produce bioactive compounds

www.terpmed.eu


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-1 Novel sources of biomass and bio-products

WATBIO



Improved water stress tolerance of crop plants

The goal of WATBIO is to use the power of next generation sequencing to develop an accelerated route for producing new germplasm with enhanced drought tolerance whilst maintaining biomass productivity and quality in water scarce, marginal environments unsuitable for food crops.

This will be achieved for three non-food crops (Populus, Miscanthus and Arundo), suitable for growth on water scarce, marginal lands, through a 5-year translational research project. Populus and Miscanthus germplasm with increased drought tolerance will be produced within WATBIO whilst for Arundo its genetic diversity will be assessed and breeding tools developed.

Twenty-two multidisciplinary partners (14 academics, and 7 SMEs) spanning the whole value chain for crop production will collectively achieve this innovation by 1) identifying key molecular, cellular and physiological traits for the maintenance of biomass production, lignocellulosic quality and water use efficiency in water-scarce environments; 2) linking these traits through modelling to underlying key genes, proteins and metabolite networks; 3) utilising a wide range of germplasm for screening in phenotyping platforms and field measurements at multiple sites to test importance of genotype x environment interactions in determining traits; 4) using sequence based gene expression data, identify 40 genes related to drought tolerance for testing proof of concept using GM approach; and 5) using sequence-based data for genome wide association and genetical genomic approaches, link physiology to traits of high heritability and to underlying genes.

WATBIO will transfer knowledge of commercial significance using its industrial partners and stakeholders enabling the deployment of biotechnology to boost European competitiveness, without the necessity of GM. Through workshops, seminars and exchanges, WATBIO will train the next generation of multi-disciplinary professionals in the area of biomass crop production on marginal lands.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

8,999,997.00

PROJECT N°

311929

DURATION

60 months

PROJECT START DATE

November 2012

LIST OF PARTNERS

1. UNIVERSITY OF SOUTHAMPTON (UK)
2. SVERIGES LANTBRUKSUNIVERSITET (SE)
3. IGA TECHNOLOGY SERVICES SRL (IT)
4. LANCASTER UNIVERSITY (UK)
5. GEORG-AUGUST-UNIVERSITAET GOETTINGEN STIFTUNG OEFFENTLICHEN RECHTS (DE)
6. ALMA MATER STUDIURUM-UNIVERSITA DI BOLOGNA (IT)
7. ALASIA FRANCO VIVAI SOCIETA SEMPLICE (IT)
8. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
9. UNIVERSITA DEGLI STUDI DELLA TUSCIA (IT)
10. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
11. TECHNISCHE UNIVERSITAET MUENCHEN (DE)
12. UNIVERSITAT DE LES ILLES BALEARS (ES)
13. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
14. INRA TRANSFERT S.A. (FR)
15. PANEPISTIMIO KRITIS (UNIVERSITY OF CRETE) (EL)
16. SWETREE TECHNOLOGIES AB (SE)
17. ABERYSTWYTH UNIVERSITY (UK)
18. GENETICLAB S.R.L. (IT)
19. ZIM PLANT TECHNOLOGY GMBH (DE)
20. WAGENINGEN UNIVERSITEIT (NL)
21. DONAL MURPHY-BOKERN (DE)
22. SCHWARZ KAI-UWE WOLFGANG (DE)

FP7-KBBE-2012-6-singlestage

WATBIO

Development of improved perennial non-food biomass and bioproduct crops for water stressed environments

Website not available yet



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-2 Marine and fresh-water biotechnology (blue biotechnology)

μAQUA



Innovative aquatic biosensors

Monitoring the quality of drinking water is of paramount importance for public health control. "Water is not a commercial product but a heritage that must be protected, defended and treated as such" (Water Framework Directive 2000/60/EC). The threat of waterborne diseases will increase in the future as a result of the increase in human population, migration from neighbouring non-EU countries and global climate change. Development of efficient, rapid tests to monitor the microbial content of water represents an essential health care strategy for control and prevention of diseases caused by waterborne pathogens. Traditional methods, e.g., cultivation, biochemical characterisation and microscopic detection, for the detection of waterborne pathogens are laborious and time-consuming, whereas molecular biological tools have greatly enhanced our ability to identify species, to determine the expression of genes regulating key cellular processes, and to estimate gene flow and distribution of species in time and space. μAQUA aims to design and develop a universal microarray chip to detect the presence of known and emerging pathogens (bacteria, viruses, protozoa and cyanobacteria) in drinking water as well as to assess the water quality using the presence of selected bioindicators, such as diatoms. In the case of the cyanobacteria, we will also develop a chip to detect their toxins. μAQUA aims to develop an innovative molecular tool amenable to automation that could be deployed on moorings for routine semi-continuous monitoring of the presence of pathogenic species. μAQUA also aims to identify cyanophages potentially capable of controlling and mitigating the periodical blooming of toxic cyanobacteria in drinking water reservoirs. These are both innovative and cost efficient technologies that will reduce energy requirements for water treatment, improve treatment performance and allow rapid management response under uncertain future climates.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,905,659.00

PROJECT N°

265409

DURATION

45 months

PROJECT START DATE

March 2011

LIST OF PARTNERS

1. UNIVERSITA DEGLI STUDI DI CAMERINO (IT)
2. UNIVERSITY OF PORTSMOUTH HIGHER EDUCATION CORPORATION (UK)
3. UNIVERSITE PIERRE ET MARIE CURIE - PARIS 6 (FR)
4. VEOLIA ENVIRONNEMENT RECHERCHE ET INNOVATION SNC (FR)
5. ISTITUTO SUPERIORE DI SANITA (IT)
6. UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN (IE)
7. NATIONAL CENTER OF INFECTIOUS AND PARASITIC DISEASES (BG)
8. QUEEN'S UNIVERSITY BELFAST (UK)
9. MARILIM GESELLSCHAFT FUR GEWASSERUNTERSUCHUNG MBH (DE)
10. ISTANBUL UNIVERSITY (TR)
11. UNIVERSIDADE DE SANTIAGO DE COMPOSTELA (ES)
12. SCIENION AG (DE)

FP7-KBBE-2010-4

μAQUA



Universal microarrays for the evaluation of fresh-water quality based on detection of pathogens and their toxins.

www.microaqua.eu



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-2 Marine and fresh-water biotechnology (blue biotechnology)

BAMMBO



Sustainable culture of marine microorganisms, algae and/or invertebrates for high added value products

Innovation is the most important engine of growth and jobs in knowledge-based bio-economies. The scope of BAMMBO (Biologically Active Molecules of Marine Based Origin) is ambitious. This is intentional. BAMMBO will provide innovative solutions to overcome existing bottle-necks associated with culturing marine organisms in order to sustainably produce high yields of value-added products for the pharmaceutical, cosmetic and industrial sectors. BAMMBO will screen and identify target marine organisms (e.g. bacteria, fungi, sponges, microalgae, macroalgae and yeasts) from diverse global locations for potential as sustainable producers of high-added value molecules (HVAB's). Our project will apply analytical methods for the extraction, purification and enrichment of targeted bioactive compounds. A detailed life cycle analysis of the production pathways developed in the project will be undertaken to fully evaluate the sustainability of production of biologically active products from marine organisms. BAMMBO will exploit knowledge and technologies developed during the project and effectively manage their transfer to relevant stakeholders in industry and the research community, as well as to policy-makers. We have brought together a multidisciplinary consortium of specialist Research and SME partners representing 8 countries including partners from ICPC countries Russia and Brazil, and from EU member states at Mediterranean, Adriatic and Atlantic coasts. In adhering to the European Strategy for Marine and Maritime Research this three year project will encourage capacity-building, integration and synergies across relevant marine sectors. Innovative technologies developed in the project will be demonstrated with the involvement of industry partners, and the results will be of interest not only to companies directly involved in the marine sector, but to other large scale industry players such as pharmaceutical companies with interest in added-value bioactive compounds.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,992,421.00

PROJECT N°

265896

DURATION

36 months

PROJECT START DATE

March 2011

LIST OF PARTNERS

1. LIMERICK INSTITUTE OF TECHNOLOGY (IE)
2. UNIVERSITE DE NICE - SOPHIA ANTIPOLIS (FR)
3. UNIVERSIDADE ESTADUAL DE CAMPINAS (BR)
4. ALGAE HEALTH LIMITED (IE)
5. GREENSEA SAS (FR)
6. UNIVERSIDADE DE SANTIAGO DE COMPOSTELA (ES)
7. INSTITUTO POLITECNICO DE LEIRIA (PT)
8. UNIVERSITE CATHOLIQUE DE LOUVAIN (BE)
9. UNIVERSITEIT GENT (BE)
10. FEDERAL STATE UNITARY ENTERPRISE STATE SCIENTIFIC-RESEARCH INSTITUTE OF GENETICS AND BREEDING OF INDUSTRIAL MICROORGANISMS (RU)
11. UNIVERSITA DEGLI STUDI DI GENOVA (IT)

FP7-KBBE-2010-4

BAMMBO

Sustainable production of biologically active molecules of marine based origin

www.bammbo.eu


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-2 Marine and fresh-water biotechnology (blue biotechnology)

BLUEGENICS



Innovative marine biodiscovery pipelines for novel industrial products

Marine organisms, in particular sponges and their associated microorganisms, are an inexhaustible source of novel bioactive (lead) compounds for biomedical application. Industrial exploitation of this natural resource using traditional approaches is, however, hampered, with a few exceptions, by unsolvable supply problems - despite of numerous efforts in the past. Therefore, there is, very likely, only one way: to start from the genes encoding the bioproducts, or their biosynthetic pathways, to sustainably obtain the active molecules in sufficient amounts. The aim of the presented industry-driven integrating project is to combine the knowledge in marine genomics, chemogenetics and advanced chemistry to produce recombinantly prepared novel secondary metabolite (lead) compounds and analogous from them, as well as pharmacologically active peptides, and to bring them up to the pre-clinical, and hopefully also to the clinical studies. This ambitious approach is based on breakthrough discoveries and the results of previous successful EU projects of members of the applying consortium, including European leaders (or worldwide leaders) in marine (sponge) genomics, metagenomics (polyketide synthase clusters), combinatorial biosynthesis and marine natural product chemistry/structure elucidation. This multidisciplinary project, driven by high-tech genomics-based SMEs with dedicated interest in bringing marine-biotechnology-derived products to the market, will also involve the discovery and sustainable production of bioactive molecules from hitherto unexploited extreme environments, such as hydrothermal vents and deep-sea sources, and the expression/scale-up of unique enzymes/proteins of biomedical and biotechnological interest. The molecular-biology-based strategies developed in this project for a sustainable exploitation of aquatic molecular biodiversity will further strengthen the international position and effectiveness of European (SME-based) blue biotechnology industry.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,869.00

PROJECT N°

311848

DURATION

48 months

PROJECT START DATE

August 2012

LIST OF PARTNERS

1. UNIVERSITAETSMEDIZIN DER JOHANNES GUTENBERG-UNIVERSITAET MAINZ (DE)
2. MANROS THERAPEUTICS (FR)
3. BIOALVO S.A. (PT)
4. NANOTECMARIN GMBH (DE)
5. SAEBYLI EHF (IS)
6. PROKAZYME EHF (IS)
7. GALAPAGOS ISTRAZIVACKI CENTAR DOO ZA ISTRAZIVANJE I RAZVOJ (HR)
8. BIOTREND, INOVACAO E ENGENHARIA EM BIOTECNOLOGIA SA (PT)
9. MATIS OHF (IS)
10. UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II. (IT)
11. UNIVERSITY OF EAST ANGLIA (UK)
12. RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITAET BONN (DE)
13. MUSEUM NATIONAL D'HISTOIRE NATURELLE (FR)
14. UPPSALA UNIVERSITET (SE)
15. RUDER BOSKOVIC INSTITUTE (HR)
16. NATIONAL RESEARCH CENTER FOR GEOANALYSIS (CN)

FP7-KBBE-2012-6-singlestage

BLUEGENICS



BlueGenics – From gene to bioactive product: Exploiting marine genomics for an innovative and sustainable European blue biotechnology industry

Website not available yet



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-2 Marine and fresh-water biotechnology (blue biotechnology)

GIAVAP



Modification of marine or freshwater algae to better suit industrial applications

Microalgae are a highly promising resource for the sustainable production of a wide variety of biomaterials for a wide range of applications. Microalgae can transform solar energy at high efficiency directly into valuable biological products using marginal water resources, waste nutrients and exhaust CO₂ without the needs for high value cropland. A wide variety of eukaryotic microalgae of high evolutionary diversity produce naturally valuable products like polyunsaturated fatty acids, carotenoids, medically active carbohydrates etc. Nevertheless only a few commercially viable algal products have entered the market. Algal cultivation and induction of high value product accumulation is a complex problem, algae grow in diluted solutions and require large areas and water volumes, causing high cultivation and harvesting costs and posing contamination problems and variable productivities due to climate variability. Genetic modifications to make microalgae better suit industrial applications are possible over a wide range of target mechanisms: stress tolerance, product accumulation pathways, cellular chlorophyll contents, novel metabolic pathways, resistance to pathogens and competition, etc. Due to the wide variability of algal strains under consideration, available techniques for genetic manipulations have to be adapted or developed for all algal strains of interest. Our consortium will adapt genetic engineering techniques to various algal strains of economic interest focusing on carotenoid and PUFA production and the overexpression of peptides of commercial value. In parallel we will develop cultivation technologies, harvesting and extraction methods for lipids, carotenoids and proteins using existing model algae strains that will then be adapted to suitable improved strains. Furthermore products will be tested for energy, pharmaceutical, nutritional or medical applications for economic evaluation of the production processes and their economic exploitation.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,596,607.00

PROJECT N°

266401

DURATION

36 months

PROJECT START DATE

January 2011

LIST OF PARTNERS

1. BEN-GURION UNIVERSITY OF THE NEGEV (IL)
2. ROTHAMSTED RESEARCH LIMITED (UK)
3. JOHANN WOLFGANG GOETHE UNIVERSITAET FRANKFURT AM MAIN (DE)
4. GEORG-AUGUST-UNIVERSITAET GOETTINGEN STIFTUNG OEFFENTLICHEN RECHTS (DE)
5. UNIVERSITY COLLEGE LONDON (UK)
6. A4F ALGAFUEL SA (PT)
7. ROSETTA GENOMICS LTD (IL)
8. UNIVERSITE LE MANS (FR)
9. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
10. UNIVERSITA DEGLI STUDI DI FIRENZE (IT)
11. ALGATECHNOLOGIES (1998) LTD (IL)
12. NIMROD SHAHAM & AMOS ZAMIR CERTIFIED PUBLIC ACCOUNTANTS (IL)
13. ROSETTA GREEN LTD (IL)

FP7-KBBE-2010-4

GIAVAP

European
CommissionGenetic Improvement of Algae for
Value Added Products<http://giavap.eu>



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-2 Marine and fresh-water biotechnology (blue biotechnology)

MACUMBA

Improved cultivation efficiency of marine microorganisms

Marine microorganisms form an almost untapped resource of biotechnological potential. However, its use is hindered by the low success rate of isolation of novel microorganisms and often by poor growth efficiency. Hence, the vast majority of marine microorganisms has not been cultivated and is often considered as 'unculturable'. MaCuMBA aims at improving the isolation rate and growth efficiency of marine microorganisms from conventional and extreme habitats, by applying innovative methods, and the use of automated high throughput procedures. The approaches include the co-cultivation of interdependent microorganisms, as well as gradient cultures and other methods mimicking the natural environment, and the exploitation of cell-to-cell communication. Signaling molecules produced by microorganisms may be necessary for stimulating growth of the same or other species, or may prevent their growth. Signaling molecules also represent an interesting and marketable product. MaCuMBA will make use of high throughput platforms such as Cocagne, using gel micro-droplet technology, or MicroDish in which many thousands of cultures are grown simultaneously. Various single-cell isolation methods, such as optical tweezers, will aid the isolation of specific target cells. Isolated microorganisms as well as their genomes will be screened for a wide range of bioactive products and other properties of biotechnological interest, such as genetic transformability. Growth efficiency and expression of 'silent' genes of selected strains will be increased also by using the clues obtained from genomic information. MaCuMBA is targeted to SMEs and industry and they make a significant part of the consortium, ensuring that the project focuses on the interests of these partners. Moreover, MaCuMBA has adopted a comprehensive and professional exploitation, dissemination, implementation, and education strategy, ensuring that MaCuMBA's results and products will be directed to end-users and stakeholders.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

8,999,948.00

PROJECT N°

311975

DURATION

48 months

PROJECT START DATE

August 2012

LIST OF PARTNERS

1. STICHTING KONINKLIJK NEDERLANDS INSTITUUT VOOR ZEEONDERZOEK (NIOZ) (NL)
2. UNIVERSITEIT VAN AMSTERDAM (NL)
3. UNIVERSITE DE BRETAGNE OCCIDENTALE (FR)
4. AQUAPHARM BIODISCOVERY LIMITED (UK)
5. CYANO BIOTECH (DE)
6. MICRODISH BV (NL)
7. POLYMARIS BIOTECHNOLOGY (FR)
8. ECOAST RESEARCH CENTRE OSTEND BVBA (BE)
9. AQUATT UETP LTD (IE)
10. MATIS OHF (IS)
11. UNIVERSIDAD MIGUEL HERNANDEZ DE ELICHE (ES)
12. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
13. THE UNIVERSITY OF WARWICK (UK)
14. DANMARKS TEKNISKE UNIVERSITET (DK)
15. UNIVERSITA DEGLI STUDI DI MILANO (IT)
16. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
17. HERIOT-WATT UNIVERSITY (UK)
18. ALBERT-LUDWIGS-UNIVERSITAET FREIBURG (DE)
19. PHARMAMAR, S.A.U. (ES)
20. LEIBNIZ-INSTITUT DSMZ-DEUTSCHE SAMMLUNG VON MIKROORGANISMEN UND ZELLKULTUREN GMBH (DE)
21. BIOALVO S.A. (PT)
22. RIBOCON GMBH (DE)
23. FERMENTALG SA (FR)

FP7-KBBE-2012-6-singlestage

Marine Microorganisms: Cultivation Methods for Improving their Biotechnological Applications

MACUMBA

Website not available yet



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-2 Marine and fresh-water biotechnology (blue biotechnology)

MAMBA



Industrially relevant products and processes from marine biotechnology

The Project aims at the mining of individual enzymes and metabolic pathways from extremophilic marine organisms and the metagenomes from microbial communities from peculiar marine environments and consequent funnelling the new enzymatic reactions and processes towards the new biotechnological applications. Project builds up on the scientific and technological excellence of individual academic and industrial partners, and beyond that, on application of the state-of-the-art technologies for archiving, molecular screening for the activities (using a unique Surface Plasmon Resonance screening platform), protein structure elucidation, enzyme engineering and directed evolution and establishing new biotechnological processes (biocatalysis, synthesis of fine chemicals, etc.). Marine sampling hotspots to produce the metagenomic resources for their further exploration will cover the whole diversity of marine microbial life at its limits (hypersaline, low and high temperature, high pressure and low water activity conditions, etc.).

Individual enzymes interacting with the substrates will be identified, and in case they are new, hyperexpressed and crystallized and their structures will be elucidated. Consequently, the most promising candidates will be scored against the chiral substrates of relevance for biocatalysis and their ability to perform in water-free systems will be evaluated, the directed evolution will be implemented to improve the performance, and specificity of the enzymes. A comprehensive bioinformatic survey throughout the whole tree of cellular life will reveal and suggest the new candidates homologous to the discovered new proteins, from other organisms to be cloned and assayed. The implementation of the set of new enzymes in the biotechnological processes for fine chemical synthesis and drug discovery will be conducted in a strong alliance with competent industrial partners.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,875,245.00

PROJECT N°

226977

DURATION

48 months

PROJECT START DATE

July 2009

LIST OF PARTNERS

1. BANGOR UNIVERSITY (UK)
2. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
3. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
4. HEINRICH-HEINE-UNIVERSITÄT DUESSELDORF (DE)
5. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS) (FR)
6. UNIVERSITE DE BRETAGNE OCCIDENTALE (FR)
7. THE GOVERNING COUNCIL OF THE UNIVERSITY OF TORONTO (CA)
8. MAX PLANCK GESELLSCHAFT ZUR FOERDERUNG DER WISSENSCHAFTEN E.V. (DE)
9. PHARMAMAR, S.A.U. (ES)
10. EVOCATAL GMBH (DE)
11. INSTITUT DE RECHERCHE PIERRE FABRESAS (FR)

FP7-KBBE-2008-2B

MAMBA

Marine Metagenomics for New Biotechnological Applications

<http://mamba.bangor.ac.uk>



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-2 Marine and fresh-water biotechnology (blue biotechnology)

MAREX

Novel marine bioactive compounds for European industries

Biodiversity in the seas is only partly explored, although marine organisms are excellent sources for many industrial products. Through close co-operation between industrial and academic partners, the MAREX project will collect, isolate and classify marine organisms, such as micro- and macroalgae, cyanobacteria, sea anemones, tunicates and fish from the Atlantic, Pacific and Indian Oceans as well as from the Mediterranean, Baltic and Arabian Seas. Extracts and purified compounds of these organisms will be studied for several therapeutically and industrially significant biological activities, including anticancer, anti-inflammatory, antiviral and anticoagulant activities by applying a wide variety of screening tools, as well as for ion channel/receptor modulation and plant growth regulation. Chromatographic isolation of bioactive compounds will be followed by structural determination. Sustainable cultivation methods for promising organisms, and biotechnological processes for selected compounds will be developed, as well as biosensors for monitoring the target compounds. The work will entail sustainable organic synthesis of selected active compounds and new derivatives, and development of selected hits to lead compounds. The project will expand marine compound libraries. MAREX innovations will be targeted for industrial product development in order to improve the growth and productivity of European marine biotechnology. MAREX aims at a better understanding of environmentally conscious sourcing of marine biotechnology products and increased public awareness of marine biodiversity and its potential. Finally, MAREX is expected to offer novel marine-based lead compounds for European industries and strengthen their product portfolios related to pharmaceutical, nutraceutical, cosmetic, agrochemical, food processing, material and biosensor applications.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,974.00

PROJECT N°

245137

DURATION

48 months

PROJECT START DATE

August 2010

LIST OF PARTNERS

1. HELSINGIN YLIOPISTO (FI)
2. UNIVERZA V LJUBLJANI (SI)
3. UNIVERSIDAD DE LA LAGUNA (ES)
4. UNIWERSYTET GDANSKI (PL)
5. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
6. ABO AKADEMI (FI)
7. AMERICAN UNIVERSITY OF BEIRUT (LB)
8. UNIVERSIDAD DE ANTOFAGASTA (CL)
9. UNIVERSITE DE STRASBOURG (FR)
10. EGE UNIVERSITESI (TR)
11. UNIVERSITA DEGLI STUDI DI NAPOLI FEDERICO II (IT)
12. UNIVERSIDAD CATOLICA DEL NORTE (CL)
13. VALTION TEKNILLINEN TUTKIMUSKESKUS (FI)
14. NATIONAL INSTITUTE OF OCEANOGRAPHY (IN)
15. IMEGO AB (SE)
16. XENTION LTD (UK)
17. BIOVICO SP ZOO (PL)
18. EUROESPES BIOETCNOLOGIA S.A. (ES)
19. BIOTECHMARINE (FR)

FP7-KBBE-2009-3

MAREX



Exploring Marine Resources for Bioactive Compounds: From Discovery to Sustainable Production and Industrial Applications

www.marex.fi



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-2 Marine and fresh-water biotechnology (blue biotechnology)

MARINE FUNGI



Sustainable culture of marine microorganisms, algae and/or invertebrates for high added value products

The aim of MARINE FUNGI is the demonstration of sustainable exploitation of marine natural resources providing appropriate culture conditions for the underutilised group of marine fungi, thus enabling efficient production of marine natural products in the laboratory and also in large scale cultures, avoiding harm to the natural environment. The focus of MARINE FUNGI are new anti-cancer compounds. The project will carry out the characterisation of these compounds to the stage of in vivo proof of concept ready to enter further drug development in order to valorise the results of the project.

MARINE FUNGI covers two approaches to gain effective producer strains:

- Candidate strains originating from one partner's strain collection will be characterised and optimised using molecular methods.
- New fungi will be isolated from unique habitats, i.e. tropical coral reefs, endemic macroalgae and sponges from the Mediterranean. Culture conditions for these new isolates will be optimised for the production of new anti-cancer metabolites.

MARINE FUNGI will develop a process concept for these compounds providing the technological basis for a sustainable use of marine microbial products as result of "Blue Biotech". The project will explore the potential of marine fungi as excellent sources for useful new natural compounds. This will be accomplished by the formation of a new strongly interacting research network comprising the scientific and technological actors, including 3 SMEs and 2 ICPC partners, necessary to move along the added-value chain from the marine habitat to the drug candidate and process concept. The generated and existing knowledge will be disseminated widely for the valorisation of the project results.

PROJECT COORDINATOR

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- HELMHOLTZ ZENTRUM FÜR OZEANFORSCHUNG KIEL (DE)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,898.00

PROJECT N°

265926

DURATION

36 months

PROJECT START DATE

May 2011

LIST OF PARTNERS

1. HELMHOLTZ ZENTRUM FÜR OZEANFORSCHUNG KIEL (DE)
2. HYPHA DISCOVERY LIMITED (UK)
3. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
4. AARHUS UNIVERSITET (DK)
5. CHRISTIAN-ALBRECHTS-UNIVERSITÄT ZU KIEL (DE)
6. TEKNOLOGISK INSTITUT (DK)
7. UNIVERSITAS DIPONEGORO (ID)
8. UNIVERSIDAD DE ANTOFAGASTA (CL)
9. EUROPEAN SCREENINGPORT GMBH (DE)
10. PROBIODRUG AG (DE)
11. UNIVERSITETET I OSLO (NO)

FP7-KBBE-2010-4

MARINE FUNGI

Natural products from marine fungi for the treatment of cancer

www.marinefungi.eu



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-2 Marine and fresh-water biotechnology (blue biotechnology)

MARINEBIOTECH



Marine biotechnology ERA-NET preparatory action

Marine biotechnology has the potential to provide a major contribution towards addressing some of the most pressing societal challenges including environmental degradation, human health and delivering sustainable supplies of food and energy.

The main goal of the CSA will be to prepare the foundation for a potential ERA-NET in the area of Marine Biotechnology which will require: a) Gaining better understanding of the Marine Biotechnology landscape in Europe and beyond. To this end the consortium envisages carrying out an analysis of the current landscape (research effort, infrastructures, stakeholders, strategies and programmes, gaps and barriers to cooperation). b) Mobilisation of key stakeholders: extending the partnership of funding agencies and European Stakeholders. To this end the consortium envisages pro-active engagement with relevant and potentially interested funding agencies and stakeholders through development of appropriate fora, the organisation of information sessions, workshops and other project activities. c) Sketching the contours of future cooperation between funding agencies in the area of Marine Biotechnology. To this end the consortium envisages workshops involving the extended network of funding agencies and representative governmental organisations to set the stage for the set-up of appropriate cooperation tools to develop joint programmes and pool resources for collaborative research on a European scale. d) Managing information relevant to marine biotechnology research, technology development and innovation, and making this available via a dedicated web-site (including Wiki pages), newsletters, reports and briefing documents.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,870.00

PROJECT N°

289311

DURATION

18 months

PROJECT START DATE

October 2011

LIST OF PARTNERS

1. NORGES FORSKNINGSRAD (NO)
2. VLAAMS INSTITUUT VOOR DE ZEE VZW (BE)
3. NORGENTA NORDDEUTSCHE LIFE SCIENCE AGENTUR GMBH (DE)
4. DANMARKS TEKNISKE UNIVERSITET (DK)
5. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
6. INSTITUT FRANCAIS DE RECHERCHE POUR L'EXPLOITATION DE LA MER (FR)
7. FONDATION EUROPEENNE DE LA SCIENCE (FR)
8. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
9. FUNDACAO PARA A CIENCIA E A TECNOLOGIA (PT)
10. TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU (TR)
11. BIOBRIDGE LIMITED (UK)

FP7-KBBE-2011-5

CSA (Coordinating) in Marine Biotechnology

MARINEBIOTECH

www.marinebiotech.eu


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-2 Marine and fresh-water biotechnology (blue biotechnology)

MG4U



Learning from research projects: specific dissemination action to potential users in marine genomics

Marine waters provide resources and services estimated at 60% of the total economic value of the biosphere. The application of cutting-edge genomic approaches has generated significant new understanding the marine environment. Rapid progress will continue given the fast rate of technological development in this field. Methods and information are sufficiently mature for direct application to achieve a more competitive European economy, and the generation of knowledge economies in the marine sector. Applications include improving the efficiency of characterisation and mining of marine diversity for biotechnology products and processes that will contribute to the welfare of mankind in a sustainable and environmentally compatible manner. Marine genomics knowledge has enormous potential to assist organisations involved in governance and sustainable management of the marine environment and its resources. However, the direct utility of marine genomics in developing commercial advantage, and in general problem solving is not understood by many decision makers in government and industry. A large amount of valuable marine genomics knowledge is inaccessible to users or exists in non-user-friendly contexts. Marine Genomics 4 Users (MG4U) responds to the specific call “Learning from research projects: specific dissemination to potential users in marine genomics” designed to address this critical bottleneck. The call was generated since it is crucial that putative end-users are aware of both the potential of genomics approaches and the state-of-the-art developments that have taken place in recent EU and other research programmes for genomics to be exploited effectively end users. MG4U brings together a project consortium containing both scientific excellence and knowledge management specialists to design an innovative and realisable project that can have a measurable impact on the current situation and become a best practice example of effective knowledge transfer.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

997,826.00

PROJECT N°

266055

DURATION

30 months

PROJECT START DATE

January 2011

LIST OF PARTNERS

1. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
2. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
3. AQUATT UETP LTD (IE)
4. GOETEBORGS UNIVERSITET (SE)
5. WESNIGK JOHANNA B (DE)
6. INSTITUT DE RECERCA I TECNOLOGIA AGROALIMENTARIES. (ES)
7. CENTRO DE CIENCIAS DO MAR DO ALGARVE (PT)

FP7-KBBE-2010-4

Marine Genomics for Users

MG4U

www.mg4u.eu



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-2 Marine and fresh-water biotechnology (blue biotechnology)

PHARMASEA



Innovative marine biodiscovery pipelines for novel industrial products

The PharmaSea project focuses on obstacles in marine biodiscovery research, development and commercialization and brings together a broad interdisciplinary team of academic and industry researchers and specialists to address and overcome these. The partners are ideally placed to demonstrate how to widen the bottlenecks and increase the flow of ideas and products derived from the marine microbiome towards a greater number of successes in a larger number of application areas. Despite the tremendous potential of marine biodiscovery, exploitation, particularly at a commercial scale, has been hampered by a number of constraints. These relate to access (physical and legal), genetics of the organisms, compound isolation, structure elucidation, early reliable validation of biological activity and best mechanisms of flow-through into exploitation. PharmaSea will solve these chronic bottlenecks by developing essential actions beyond the state of the art and linking them with best practice and appropriate pragmatic approaches. The robust pipeline structure established within PharmaSea will process a wide genetic basis including marine microbial strain collections held by partners and new strain collections from extreme environments (deep, cold and hot vent habitats) to produce new products with desirable characteristics for development by the SME partners in three accessible market sectors, health (infection, inflammation, CNS diseases), personal care and nutrition. The global aim of PharmaSea is to produce two compounds at larger scale and advance them to pre-clinical evaluation. To address relevant challenges in marine biodiscovery related to policy and legal issues, PharmaSea will bring together practitioners, legal experts, policy advisors/makers and other stakeholders, focusing on the feasibility of harmonising, aligning and complementing current legal frameworks with recommendations and ready to use solutions tailored to marine biodiscovery.

PROJECT COORDINATOR

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- KATHOLIEKE UNIVERSITEIT LEUVEN (BE)

FUNDING SCHEME

CP

EC CONTRIBUTION €

9,465,907.00

PROJECT N°

312184

DURATION

48 months

PROJECT START DATE

October 2012

LIST OF PARTNERS

1. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
2. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)
3. AQUAPHARM BIODISCOVERY LIMITED (UK)
4. UNIVERSITETET I TROMSOE (NO)
5. ECOAST RESEARCH CENTRE OSTEND BVBA (BE)
6. BIOBRIDGE LIMITED (UK)
7. FUNDACION CENTRO DE EXCELENCIA EN INVESTIGACION DE MEDICAMENTOS INNOVADORES EN ANDALUCIA (ES)
8. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
9. BIOCUM (DE)
10. STAZIONE ZOOLOGICA ANTON DOHRN (IT)
11. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
12. UNIVERSIDADE DE SANTIAGO DE COMPOSTELA (ES)
13. THE ROYAL SOCIETY OF CHEMISTRY (UK)
14. C-LECTA GMBH (DE)
15. DANMARKS TEKNISKE UNIVERSITET (DK)
16. DEEP TEK LIMITED (UK)
17. ADVANCED CHEMISTRY DEVELOPMENT UK LIMITED (UK)
18. WUHAN UNIVERSITY (CN)
19. INSTITUTE OF MICROBIOLOGY, CHINESE ACADEMY OF SCIENCES (CN)
20. UNIVERSITY OF THE WESTERN CAPE (ZA)
21. INSTITUTO DE DINAMICA CELULAR Y BIOTECNOLOGIA (CL)
22. ASOCIACION INSTITUTO NACIONAL DE BIODIVERSIDAD (CR)
23. UNION INTERNATIONALE POUR LA CONSERVATION DE LA NATURE ET DE SES RESSOURCES (CH)
24. UNIVERSITY OF WAIKATO (NZ)

FP7-KBBE-2012-6-singlestage

PHARMASEA

Increasing Value and Flow in the Marine Biodiscovery Pipeline

Website not available yet



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-2 Marine and fresh-water biotechnology (blue biotechnology)

RADAR



Innovative aquatic biosensors

RADAR is a 7-member consortium that aims to develop a robust, sensitive, and versatile label-free, biosensor platform for spot measurements and on-line monitoring of toxins and pollutants in food production processes and in the aquatic environment.

Specificity towards chemical pollutants and toxins is achieved by using recombinant receptors (namely the estrogen receptor and the aryl hydrocarbon receptor) whose amino acid sequences have been rationally designed based on genomic and functional information from aquatic organisms.

Sensitivity of the biosensor is increased by the unique combination of isotachophoretic pre-concentration step, and surface nanostructuring & chemical modification.

The integration of the label-free detection sensors with an on-line automated sample handling and a wireless communication system will yield a best-in-class biosensor platform for robust, specific and sensitive detection of EDCs and PAHs in difficult operating conditions.

To validate the RADAR biosensor the consortium will test the biosensors in fresh and marine water, in fish farms, and in food products such as fish, fruit juices, and milk. Through their contacts in these industries, the partners will evaluate the performance of the biosensors in such environments, analyzing a representative number of samples and reporting on the stability, ruggedness and accuracy of the sensors used under laboratory and real test conditions.

This project is expected to have a high economic impact, since our cost-effective sensor could find a worldwide distribution in most food production and water testing lines as supported by Agilent Technologies Inc.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,926,127.00

PROJECT N°

265721

DURATION

48 months

PROJECT START DATE

January 2011

LIST OF PARTNERS

1. CSEM CENTRE SUISSE D'ELECTRONIQUE ET DE MICROTECHNIQUE SA, RECHERCHE ET DEVELOPPEMENT (CH)
2. JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
3. OPTICS BALZERS AG (LI)
4. FONDAZIONE PER L'ISTITUTO DI RICERCA IN BIOMEDICINA (CH)
5. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
6. ELYSIUM PROJECTS LIMITED (UK)
7. NACIONALNI INSTITUT ZA BIOLOGIJO (SI)

FP7-KBBE-2010-4

RADAR

Rationally Designed Aquatic Receptors integrated in label-free biosensor platforms for remote surveillance of toxins and pollutants

www.fp7-radar.eu


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-2 Marine and fresh-water biotechnology (blue biotechnology)

SEABIOTECH



Innovative marine biodiscovery pipelines for novel industrial products

SeaBioTech is a 48-month project designed and driven by SMEs to create innovative marine biodiscovery pipelines as a means to convert the potential of marine biotechnology into novel industrial products for the pharmaceutical (human and aquaculture), cosmetic, functional food and industrial chemistry sectors. SeaBioTech will reduce barriers to successful industrial exploitation of marine biodiversity for companies more accustomed to 'terrestrial' biotechnology. SeaBioTech directly addresses five key challenges to remove bottlenecks in the marine biodiscovery pipeline, leading to (1) improvements in the quality of marine resources available for biotechnological exploitation, (2) improvement in technical aspects of the biodiscovery pipeline to shorten time to market, and (3) developing sustainable modes of supply of raw materials for industry. The two last challenges centre on enabling activities to enhance the marine biodiscovery process: first, clarification of legal aspects to facilitate access to marine resources, their sustainable use, and their secure exploitation; second, to create an improved framework for access to marine biotechnology data and research materials. To achieve its goals, SeaBioTech brings together complementary and world-leading experts, integrating biology, genomics, natural product chemistry, bioactivity testing, industrial bioprocessing, legal aspects, market analysis and knowledge exchange. The expertise assembled within the consortium reflects the industry-defined needs, from the SME partners' initial definition of market and product opportunities to their ultimate proof-of-concept demonstration activities. SeaBioTech will have significant impact on research and technology, on innovation, on European competitiveness and on economic growth. It will provide a model to accelerate the development of European biotechnology into a world leading position.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

7,461,716.00

PROJECT N°

311932

DURATION

48 months

PROJECT START DATE

August 2012

LIST OF PARTNERS

1. UNIVERSITY OF STRATHCLYDE (UK)
2. INGENZA LIMITED (UK)
3. PROKAZYME EHF (IS)
4. MARINE BIOPOLYMERS LIMITED (UK)
5. PHARMAQ AS* (NO)
6. AXXAM SPA (IT)
7. HORIZON DISCOVERY LIMITED (UK)
8. MATIS OHF (IS)
9. LUNDS UNIVERSITET (SE)
10. JULIUS-MAXIMILIANS UNIVERSITAET WUERZBURG (DE)
11. HELLENIC CENTRE FOR MARINE RESEARCH (EL)
12. THE SCOTTISH ASSOCIATION FOR MARINE SCIENCE (UK)
13. NOVAMEN SAS (FR)
14. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)

FP7-KBBE-2012-6-singlestage

From sea-bed to test-bed: harvesting the potential of marine microbes for industrial biotechnology

SEABIOTECH

Website not available yet



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-2 Marine and fresh-water biotechnology (blue biotechnology)

SPECIAL



Sustainable culture of marine microorganisms, algae and/or invertebrates for high added value products

The SPECIAL project aims at delivering breakthrough technologies for the biotechnological production of cellular metabolites and extracellular biomaterials from marine sponges. These include a platform technology to produce secondary metabolites from a wide range of sponge species, a novel in vitro method for the production of biosilica and recombinant technology for the production of marine collagen.

Research on cellular metabolites will be based upon our recent finding that non-growing sponges continuously release large amounts of cellular material. Production of biosilica will be realized through biosintering, a novel enzymatic process that was recently discovered in siliceous sponges. Research on sponge collagen will focus on finding the optimal conditions for expression of the related genes.

Alongside this research, the project will identify and develop new products from sponges, thus fully realizing the promises of marine biotechnology. Specifically, the project will focus on potential anticancer drugs and novel biomedical/industrial applications of biosilica and collagen, hereby taking advantage of the unique physico-chemical properties of these extracellular sponge products.

The consortium unites seven world-class research institutions covering a wide range of marine biotechnology-related disciplines and four knowledge-intensive SMEs that are active in the field of sponge culture, drug development and nanobiotechnology.

The project is clearly reflecting the strategic objectives outlined in the position paper European Marine Strategy (2008); it will enhance marine biotechnology at a multi-disciplinary, European level and provide new opportunities for the European industry to exploit natural marine resources in a sustainable way. In particular the biotechnological potential of marine sponges, which has for a long time been considered as an eternal promise, will be realized through the SPECIAL project.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,991,682.00

PROJECT N°

266033

DURATION

36 months

PROJECT START DATE

December 2010

LIST OF PARTNERS

1. UNIVERSIDADE DO MINHO (PT)
2. TEL AVIV UNIVERSITY (IL)
3. PORIFARMA BV (NL)
4. STUDIO ASSOCIATO GAIA SNC DEI DOTTORI ANTONIO SARA E MARTINA MILANESE (IT)
5. UNIVERSITA DEGLI STUDI DI GENOVA (IT)
6. UNIVERSITAETSMEZIN DER JOHANNES GUTENBERG-UNIVERSITAET MAINZ (DE)
7. NATIONAL RESEARCH CENTER FOR GEOANALYSIS (CN)
8. KAROLINSKA INSTITUTET (SE)
9. ATRAHISIS SRL (IT)
10. UNIVERSIDADE DOS AÇORES (PT)
11. NANOTECMARIN GMBH (DE)

FP7-KBBE-2010-4

SPECIAL

Sponge Enzymes and Cells for Innovative Applications

www.project-special.eu


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-2 Marine and fresh-water biotechnology (blue biotechnology)

SUNBIOPATH



Sustainable use of seas and oceans - Biomass from micro- and macro-algae for industrial applications

SUNBIOPATH - towards a better sunlight to biomass conversion efficiency in microalgae – is an integrated program of research aimed at improving third-generation biomass yields and valorization of biomass for two Chlorophycean photosynthetic microalgae, *Chlamydomonas reinhardtii* and *Dunaliella salina*. Biomass yields will be improved at the level of primary processes that occur in the chloroplasts (photochemistry and sunlight capture by the light harvesting complexes) and in the cell (biochemical pathways and signaling mechanisms that influence ATP synthesis). Optimal growth of the engineered microalgae will be determined in photobioreactors, and biomass yields will be tested using a scale up approach in photobioreactors of different sizes (up to 250 L), some of which being designed and built during SUNBIOPATH. Biomethane production will be evaluated. Compared to other biofuels, biomethane is attractive because the yield of biomass to fuel conversion is higher.

Valorization of biomass will also be achieved through the production of high-value antigens in the chloroplast. Significant progress has been made in the development of chloroplast genetic engineering in microalgae such as *Chlamydomonas*, however the commercial exploitation of this technology still requires additional research. SUNBIOPATH will address the problem of maximising transgenic expression in the chloroplast and will develop a robust system for producing vaccines by developing methodologies such as inducible expression and trans-operon expression.

A techno economic analysis will be made to evaluate the feasibility of using these algae for the purposes proposed (antigen production in the chloroplast and/or biomethane production) taking into account their role in CO₂ mitigation.

PROJECT COORDINATOR

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- UNIVERSITE DE LIEGE (BE)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,998,182.00

PROJECT N°

245070

DURATION

36 months

PROJECT START DATE

January 2010

LIST OF PARTNERS

1. UNIVERSITE DE LIEGE (BE)
2. UNIVERSITAET BIELEFELD (DE)
3. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
4. UNIVERSITA DEGLI STUDI DI VERONA (IT)
5. WESTFAELISCHE WILHELMS-UNIVERSITAET MUENSTER (DE)
6. WEIZMANN INSTITUTE OF SCIENCE (IL)
7. UNIVERSITE DE GENEVE (CH)
8. UNIVERSITY COLLEGE LONDON (UK)
9. KARLSRUHER INSTITUT FÜR TECHNOLOGIE (DE)
10. WAGENINGEN UNIVERSITEIT (NL)

FP7-KBBE-2009-3

SUNBIOPATH

Towards a better sunlight to biomass conversion efficiency in microalgae

www2.ulg.ac.be/genemic/sunbiopath


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-3 Industrial biotechnology: novel high added-value bio-products and bio-processes

AMBIOCAS



Integrated multi-enzyme, multistep biocatalytic engineering

This project intends to engineer transaminase libraries that will be applied as the main enzymatic technology to deliver the amine functionality in the commercially valuable products of both chiral and bulk amine targets. These enzymes will be used in enzymatic cascades where simple starting materials are converted into the required intermediates for transamination or further enzymatic steps will be used to remove products from the transaminase reaction which will add value by extra functionality. This will also be supported by the development of enzymatic cascades to deliver efficient co-factor recycling and achieve the high conversions required for industrial use. A high throughput screening method based on a further enzymatic cascade will be developed. Engineering solutions will be used to overcome obstacles associated with the implementation of this core technology on a larger scale and integrate the use of other enzymes into the synthetic pathway to allow multi-step, multi-enzyme cascades to be used to deliver complex multi-functional amine products and processes. The industrial partner will target the development of enzymes from the project for specific application into their new products range. Life cycle analysis and environmental impact analysis will compare the final methods with conventional chemical synthesis and allow advantages to be objectively defined.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,524,792.00

PROJECT N°

245144

DURATION

36 months

PROJECT START DATE

January 2010

LIST OF PARTNERS

1. THE UNIVERSITY OF MANCHESTER (UK)
2. UNIVERSITAET GRAZ (AT)
3. DANMARKS TEKNISKE UNIVERSITET (DK)
4. EVONIK DEGUSSA GMBH (DE)
5. RIJKSUNIVERSITEIT GRONINGEN (NL)
6. CLEA TECHNOLOGIES BV (NL)

FP7-KBBE-2009-3

Amine synthesis through biocatalytic cascades

AMBIOCAS

www.ambiocas.eu



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-3 Industrial biotechnology: novel high added-value bio-products and bio-processes

AMYLOMICS



Robust and novel biocatalysts for industrial applications

The aim of the AMYLOMICS project is to develop novel, robust enzymes for the starch and carbohydrate industries. The novel enzymes should enable the formation of new primary products, such as oligosaccharides of defined sizes, composition and degree of branching, new types of linkages, cyclic or more complex polysaccharides and an increased digestive resistance, as well as secondary sugar derivatives such as substituted starches, rare sugars or novel isomers.

Fundamental to the success of the project will be the development of an efficient metagenomic platform technology for enzyme screening based on massive parallel 454 sequencing and microarray sequence capture. This platform will enable "genome walking" of complex metagenomic DNA and greatly facilitate the access to the largely unexplored wealth of genes in the environment.

The starch industry is the most developed sector of the polysaccharide industry and European companies play a leading role in the world market. The industry is in a constant need for a range of robust enzymes that can be used for the synthesis, fractionation and/or modification of carbohydrates. It actively searches for sustainable and more economical alternatives to existing techniques, both for the production of novel higher value products and for the improvement of older processes. The metagenomic mining platform developed in the project is expected to provide a large number of robust thermophilic starch and carbohydrate modifying enzymes and lead to new and improved biocatalytic process technologies.

Lead users of the project's results will be companies like the project partners Roquette Frères, a world leader in starch processing, Roche Molecular Systems, a leading providers of new tools, technologies and services in the genomic industry, and SME companies like Prokazyme who through the improvement of sequence based metagenomic bioprospecting platform can expand their product range of speciality products.

PROJECT COORDINATOR

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- MATIS OHF (IS)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,448,158.00

PROJECT N°

265992

DURATION

36 months

PROJECT START DATE

March 2011

LIST OF PARTNERS

1. MATIS OHF (IS)
2. SEMGEN DOO ZA RACUNALNO PROGRAMIRANJE I SAVJETOVANJE (HR)
3. ROCHE NIMBLEGEN INC (US)
4. PROKAZYME EHF (IS)
5. RIJKSUNIVERSITEIT GRONINGEN (NL)
6. UNIVERSITAET STUTTGART (DE)
7. LUNDS UNIVERSITET (SE)
8. ROQUETTE FRERES SA (FR)
9. INGENZA LIMITED (UK)

FP7-KBBE-2010-4

AmylolEnzymes Captured by Targeted Metagenomics

AMYLOMICS

<http://amylomics.org>

ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-3 Industrial biotechnology: novel high added-value bio-products and bio-processes

BIO-TIC



Overcoming hurdles for innovation in industrial biotechnology in Europe

The project goal is to draw-up a blueprint document of recommendations for overcoming the innovation hurdles within a selection of targeted business market segments that can make a major contribution to an accelerated take-up of industrial biotechnology (IB) into the market place.

This will involve:

- Analysis of existing knowledge bank relating to market, research and institutional barriers hindering uptake of IB technology innovations into the market place
- Engagement with a broad range of stakeholders across the full multidisciplinary IB spectrum to update, develop and validate these innovation barriers to market entry
- Formulation of a roadmap of action plans and policy recommendations for accelerated uptake of IB into a number of targeted product segment areas

Bio-TIC will compile an in-depth preparation of three "interim roadmaps" comprising market projections, R&D priorities and non-technological barriers to IB market entry. These will act to guide and facilitate a series of convened stakeholder workshops at both national and European level for a full discussion on innovation barriers, in order to validate and further elaborate more comprehensive roadmaps, while taking on board the totality of views from the diverse IB stakeholder base. Finally, the partners will collate and further refine the developed roadmaps into a joint European IB Roadmap and Policy recommendations document, with maximum stakeholder buy-in for wide dissemination and maximum impact.

The project will be co-ordinated by EuropaBio- the European Association for Biotechnology Industries, who will also be joined by CEFIC, the European Chemical Industry Council, representing the European chemical industry. These will be joined in the consortium by a further 8 members incorporating innovation agencies, cluster organisations and private management consultancies; all of whom have many complementary skills and expertise and who have worked together in the past on similar initiatives.

PROJECT COORDINATOR

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- EUROPABIO - The European Association of Bioindustries (BE)

FUNDING SCHEME

CSA

EC CONTRIBUTION €

1,995,798.00

PROJECT N°

312121

DURATION

36 months

PROJECT START DATE

August 2012

LIST OF PARTNERS

1. EUROPABIO, THE EUROPEAN ASSOCIATION OF BIOINDUSTRIES (BE)
2. CONSEIL EUROPÉEN DE L'INDUSTRIE CHIMIQUE (BE)
3. PNO CONSULTANTS LIMITED (UK)
4. NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK, TNO (NL)
5. DECHEMA GESELLSCHAFT FUER CHEMISCHE TECHNIK UND BIOTECHNOLOGIE E.V. (DE)
6. NOVA-INSTITUT FUR POLITISCHE UND OKOLOGISCHE INNOVATION GMBH (DE)
7. BVBA CLEVER CONSULT (BE)
8. CHEMISTRY INNOVATION LIMITED (UK)
9. ASSOCIATION INDUSTRIES ET AGRORESSOURCES (FR)
10. POYRY MANAGEMENT CONSULTING OY (FI)
11. CIAOTECH SRL (IT)

FP7-KBBE-2012-6-singlestage

BIO-TIC

The Industrial Biotech Research and Innovation Platforms Centre - towards Technological Innovation and solid foundations for a growing industrial biotech sector in Europe

Website not available yet



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-3 Industrial biotechnology: novel high added-value bio-products and bio-processes

BIOINTENSE



Mastering integration and intensification of bioprocesses

BIOINTENSE is directed at addressing the challenges of low productivity and process intensity frequently hampering the implementation of bioprocesses in industry. For the future of the next generation of chemical processes in Europe it provides the opportunity not only to address intensification but also to enable this in a rapid manner. BIOINTENSE will make use of μ -technology to develop economically feasible intensified processes by integration of separation and process control, and to create tools to speed up the characterization and assessment of different process options and technologies and biocatalysts for increased process intensity. A strong focus lies in increasing the scale of biocatalytic and cascade reactions and to improve the fundamental factors that affect the economic feasibility. Both numbering up and scale-up methodologies will be tested.

The BIOINTENSE consortium is ideally suited to address the challenges in KBBE.2012.3.3-03 and to meet the objectives, as it spans across disciplines, academia and industry: SMEs with a strong technology base in the areas of integrating separation in bioprocessing, biocatalyst development, immobilization, μ -reactor fabrication, and on-line monitoring will ensure top of the line industry focused research with a strong focus on scale-up and implementation.

There is an urgent need for these challenges to be overcome to move towards a European Knowledge Based BioEconomy to exploit the environmental savings and economic potential if such bioprocesses were in place. Building on the recent advances in molecular biology, the time is now right to develop the necessary process engineering methodologies and implementation strategies to unlock the full potential of bioprocesses.

PROJECT COORDINATOR

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- DANMARKS TEKNISKE UNIVERSITET (DK)

FUNDING SCHEME

CP

EC CONTRIBUTION €

5,554,685.00

PROJECT N°

312148

DURATION

42 months

PROJECT START DATE

August 2012

LIST OF PARTNERS

1. DANMARKS TEKNISKE UNIVERSITET (DK)
2. TECHNISCHE UNIVERSITAET GRAZ (AT)
3. UNIVERZA V LJUBLJANI (SI)
4. UNIVERSITEIT GENT (BE)
5. THE UNIVERSITY OF MANCHESTER (UK)
6. LUNDS UNIVERSITET (SE)
7. DSM INNOVATIVE SYNTHESIS BV (NL)
8. VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. (BE)
9. IX-FACTORY GMBH (DE)
10. MICROFLUIDIC CHIPSHOP GMBH (DE)
11. LUXCEL BIOSCIENCES LTD (IE)
12. LENTIKAT'S A.S. (CZ)
13. C-LECTA GMBH (DE)
14. SIGMA-ALDRICH PRODUCTION GMBH (CH)

FP7-KBBE-2012-6-singlestage

BIOINTENSE



Mastering bioprocess Integration and intensification across scales

Website not available yet



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-3 Industrial biotechnology: novel high added-value bio-products and bio-processes

BIONEXGEN



Biotechnology for 'greening' the chemical industry - Industrial bioprocesses for fine and speciality chemicals and intermediates

BIONEXGEN will develop the next generation of biocatalysts that can be used to develop eco-efficient processes for the chemical industry. Using both renewable resources with reduced greenhouse gas production as compared to their fossil counterparts and biotechnological routes with reduced energy consumption and with lower toxic wastes compared to conventional chemical processes it will address the main objectives of this call. Routes to specialised, high-value chemicals (e.g. chiral chemical compounds) normally require long chemical synthetic routes involving complex reaction steps with toxic side products and waste streams this proposal will replace these by clean biocatalysis routes. To broaden the range of fine and speciality chemicals and intermediates produced by biotechnological routes, research will address: (i) design and optimisation of enzymes to be used in synthetic chemistry, (ii) the selection/development of modified microorganisms which may be resistant to heat, pressure or low pH while producing relevant or new chemical entities and (iii) the integration of biotechnological steps into conventional chemical processes.

The project will develop and integrate biotechnological routes yielding identified fine and speciality chemicals and intermediates which are promising in terms of eco-efficiency, economic potential, complexity and /or specificity of the synthetic pathways. Economic viability and eco-efficiency will be evaluated and assessed on a quantitative basis.

The strong involvement of industrial partners, in particular SMEs is a strength of this project.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

7,774,883.00

PROJECT N°

266025

DURATION

36 months

PROJECT START DATE

February 2011

LIST OF PARTNERS

1. THE UNIVERSITY OF MANCHESTER (UK)
2. UNIVERSITAET STUTTGART (DE)
3. DANMARKS TEKNISKE UNIVERSITET (DK)
4. MIKROBIOLOGICKY USTAV. AVCR, V.V.I. (CZ)
5. RIJKSUNIVERSITEIT GRONINGEN (NL)
6. CLEA TECHNOLOGIES BV (NL)
7. ENTRECHEM SL (ES)
8. UNIVERSIDAD DE OVIEDO (ES)
9. GALAB LABORATORIES GMBH (DE)
10. LEIBNIZ-INSTITUT FUR PFLANZENBIOCHEMIE (DE)
11. ACIB GMBH (AT)
12. KUNGLIGA TEKNISKA HOEGSKOLAN (SE)
13. LENTIKAT'S A.S. (CZ)
14. SLOVENSKA TECHNICKA UNIVERZITA V BRATISLAVE (SK)
15. BASF SE (DE)
16. UNIVERSITY COLLEGE LONDON (UK)
17. CHEMISTRY INNOVATION LIMITED (UK)

FP7-KBBE-2010-4

BIONEXGEN

Developing the Next Generation of Biocatalysts for Industrial Chemical Synthesis

www.bionexgen.eu



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-3 Industrial biotechnology: novel high added-value bio-products and bio-processes

BIOSURFING



Cellular, metabolic and genetic engineering for novel compounds

This project aims to create new-to-nature and tailor-made biosurfactants through metabolic engineering of the unconventional yeast *Candida bombicola*. Biosurfactants produced by fermentation offer a worthy alternative to traditional surfactants, which are typically derived from non-renewable petrochemical resources and may cause environmental problems due to their ecotoxicity and poor biodegradability. Despite the clear advantages of biosurfactants, their overall use is hampered by the lack of structural variation. This is in sharp contrast to chemically produced surfactants where one can introduce variation by simply changing the building blocks. Structural variation is essential as (bio)surfactants find application in a very broad range of sectors. Biosurfactants are a promising target for the biobased economy as the world surfactant production exceeds 13 Mton/year. This project will develop a generic platform technology for the fermentative production of biosurfactants, thus stimulating the market penetration of biosurfactants in various applications.

The very efficient biosurfactant producing yeast *C. bombicola* will be metabolically engineered such that all structural parts of the glycolipid biosurfactant molecule can be controlled: fatty acid tail, sugar moiety, acetylation and lactonization. New technology for metabolic engineering of unconventional organisms such as the use of meganucleases will be developed. Metabolically engineered production strains equipped with new combinations of genes and pathways will synthesize tailor-made and new-to-nature biosurfactants. For each target molecule, a fermentation process will be developed and the molecules will be evaluated for various applications. The project thus covers the whole innovation chain from basic research to production and application development. To achieve this goal, a complementary consortium of academic and industrial partners has been formed that covers the whole range of required expertises.

PROJECT COORDINATOR

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- UNIVERSITEIT GENT (BE)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,970,613.00

PROJECT N°

289219

DURATION

48 months

PROJECT START DATE

October 2011

LIST OF PARTNERS

1. UNIVERSITEIT GENT (BE)
2. COLLECTIS SA (FR)
3. UNIVERSITY OF ULSTER (UK)
4. BIO BASE EUROPE PILOT PLANT VZW (BE)
5. WERNER & MERTZ GMBH (DE)
6. COSMETIC SP (EL)
7. ECOVER BELGIUM NV (BE)
8. UNIVERSITE PIERRE ET MARIE CURIE - PARIS 6 (FR)

FP7-KBBE-2011-5

BIOSURFING



New-to-nature biosurfactants by metabolic engineering: production and application

www.biosurfing.ugent.be

ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-3 Industrial biotechnology: novel high added-value bio-products and bio-processes

ERA-IB-2



Deepened and enlarged European cooperation in the area of Industrial Biotechnology - ERA-NET

The ERA-Net Industrial Biotechnology 2 (ERA-IB-2) will increase Europe's competitiveness in Industrial Biotechnology (IB) by providing a platform for long-lasting collaboration and cooperation between national/regional programme owners and managers of a large number of European countries, including new Member States and Associated/ICP Countries.

The key mission of ERA-IB-2 is to contribute to a European knowledge-based bio-economy (KBBE) by reducing fragmentation in IB R&D funding and by fostering the exchange of knowledge across borders, and to increase cost-effectiveness by pooling resources and optimising mechanisms for joint calls.

The KBBE is the tool to achieving sustainable economic growth in Europe, as it will lead to sustainable, environmentally sound industrial processes and products which substitute fossil resources with bio-based (renewable) raw materials.

Industrial Biotechnology will be one of the key technologies of this KBBE, and ERA-IB-2 will ensure Europe makes full use of her potential by identifying IB-related R&D needs through stakeholder dialogue and responding to these needs with coordinated, joint actions (joint calls). These calls will lead to greater integration of IB R&D actors and activities, and will also improve access to finance and stimulate industry participation – and thus industry investment – in the lead market of bio-based products.

As a consequence, the limited resources of each country will be used more efficiently.

ERA-IB-2 builds on the success of the FP6 project "ERA-IB" and develops the network further, into a truly pan-European approach to IB R&D funding which should ultimately lead to a self-sustained network.

ERA-IB-2 will also align with other initiatives in the area and e.g. support the developing JPIs by presenting to them the view of the national/regional programmes on IB topics.

PROJECT COORDINATOR

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- Fachagentur Nachwachsende Rohstoffe e.V. (DE)

FUNDING SCHEME

CSA

EC CONTRIBUTION €

1,999,992.00

PROJECT N°

291814

DURATION

48 months

PROJECT START DATE

December 2011

LIST OF PARTNERS

1. FACHAGENTUR NACHWACHSENDE ROHSTOFFE E.V. (DE)
2. NEDERLANDSE ORGANISATIE VOOR WETENSCHAPPELIJK ONDERZOEK (NL)
3. VLAAMS GEWEST (BE)
4. AGENTSCHAP VOOR INNOVATIE DOOR WETENSCHAP EN TECHNOLOGIE (BE)
5. FORSCHUNGSZENTRUM JUELICH GMBH (DE)
6. THE TECHNOLOGY STRATEGY BOARD (UK)
7. FUNDACAO PARA A CIENCIA E A TECNOLOGIA (PT)
8. AGENCE DE L'ENVIRONNEMENT ET DE LA MAITRISE DE L'ENERGIE (FR)
9. SÄCHSISCHES STAATSMINISTERIUM FÜR UMWELT UND LANDWIRTSCHAFT (DE)
10. TÜRKİYE BİLİMSEL VE TEKNOLOJİK ARASTIRMA KURUMU (TR)
11. MINISTARSTVO ZNANOSTI, OBRAZOVANJA I SPORTA (HR)
12. NARODOWE CENTRUM BADAN I ROZWOJU (PL)
13. MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT (IL)
14. UNITATEA EXECUTIVA PENTRU FINANTAREA INVATAMANTULUI SUPERIOR, A CERCETARII, DEZVOLTARII SI INOVARII (RO)
15. MINISTERIO DE CIENCIA E INNOVACION (ES)
16. NORGES FORSKNINGSRAD (NO)
17. FORSKNINGS- OG INNOVATIONSSTYRELSEN (DK)
18. FOUNDATION FOR ASSISTANCE TO SMALL INNOVATIVE ENTERPRISES (RU)
19. BUNDESMINISTERIUM FUER BILDUNG UND FORSCHUNG (DE)

FP7-ERANET-2011-RTD

ERA-Net for Industrial Biotechnology 2

ERA-IB-2

www.era-ib.net/era-ib-2



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-3 Industrial biotechnology: novel high added-value bio-products and bio-processes

INTENSO



Mastering integration and intensification of bioprocesses

The European Life science and chemical industries increasingly depend on efficient, sustainable, and cost-effective bioprocessing platforms to remain competitive. A critical assessment of current bottlenecks during (bio) manufacturing clearly indicates that the recovery and purification of biologicals in large scale is responsible for many inefficiencies.

INTENSO proposes an evaluation of the current situation of the downstream processing scenario with the aim of identifying inefficiencies and concomitantly introduce a debottlenecking overarching strategy. The later will be build up on the basis of a multidisciplinary approach, which considers opportunities to improve the process technology and underlying chemistry/biology and materials science at the same time. INTENSO will work alongside 4 technological axes, targeting promising and up-coming technologies and tailoring such technologies to the manufacturing of various classes of (bio) products. Intensification of individual unit operations and global process integration, as well as, dovetailing with fermentation/cell cultivation will be employed to the mentioned end.

INTENSO will target new classes of (bio) products like Monoclonal Antibodies (Mabs), pDNA (e.g. for genetic vaccination), Virus Like Particles (VLP) or nano-plexes. All the mentioned new products are part of most industrial R&D pipelines and offer an excellent opportunity to introduce innovative bioprocessing.

The results of the project are expected to contribute to the understanding of current industrial downstream processing practice, to the definition and alleviation of current inefficiencies, to the development and/or implementation of novel technologies, and to more efficient/sustainable and cost effective (bio) manufacturing. Various technologies will be studied utilizing a nano-to-process strategy so as to introduce integration/intensification during bioprocessing.

FP7-KBBE-2012-6-singlestage

INTENSO



Gaining Productivity, Cost Efficiency and Sustainability in the Downstreaming Processing of Bio Products by novel Integration and Intensification strategies

Website not available yet



PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,260,960.00

PROJECT N°

312004

DURATION

54 months

PROJECT START DATE

August 2012

LIST OF PARTNERS

1. JACOBS UNIVERSITY BREMEN GGMBH (DE)
2. BIA SEPARATIONS DOO (SI)
3. UNIVERSIDAD NACIONAL DE QUILMES (AR)
4. CHIPRO GMBH (DE)
5. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
6. ICOSAGEN AS (EE)
7. SOFIISKI UNIVERSITET SVETI KLIMENT OHRIDSKI (BG)
8. PROXCYS (NL)
9. INSTITUTO SUPERIOR TECNICO (PT)
10. INFOCONSULT GESELLSCHAFT FUR INFORMATIONSTECHNIK MBH (DE)
11. BIOMEDAL SL (ES)
12. VIRTUALPIE LTD (UK)
13. ERA BIOTECH (ES)
14. GENERI BIOTECH (CZ)
15. ETHRIS GMBH (DE)
16. DSM BIOLOGICS COMPANY BV (NL)

ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-3 Industrial biotechnology: novel high added-value bio-products and bio-processes

IRENE



Molecular modelling for rational design of industrial enzymes – SICA (Russia)

IRENE project aims at overcoming existing bottlenecks for a broader diffusion of biocatalysis and at accelerating the sustainable innovation of chemical industry by developing computational methods and strategies that will enable to rationally design and produce the next generation of biocatalysts for industrial applications. The consortium is funded on the combination of robust multidisciplinary expertise from EU, Russia and Uzbekistan. Due to the interaction between theoretical groups and experimentalists all computational tools used in this project will be validated by experiments. Failures and successes will be used for methods' evaluation and tuning, in an iterative process that will lead to new methods but also to the definition of practical guidelines, for any specific enzyme design issue. The convergence of different expertise will face 4 main tasks: 1) fast rational design of efficient biocatalysts; 2) fast and efficient in silico screening of available enzymes/mutants to exploit catalytic potential of existing biocatalyst and providing quantitative parameters describing enzyme's efficiency; 3) fast substrate-screening and rational substrate engineering; 4) understanding molecular basis of biocatalyst' action and properties. IRENE will pursue these objectives by taking advantage of computational strategies used in different disciplines and integrate them in an unified concept for studying enzyme catalysis. The four main families of computational methods, Quantum Mechanics, Molecular Mechanics, Quantitative Structure Activity Relationships and Bioinformatics, will be used in an integrated approach. The project will have three major design subjects: 1) introduction of new activities in specific enzyme scaffolds (reaction promiscuity); 2) improvement of catalytic activity towards specific targets (substrate promiscuity); 3) the redesign of enantioselectivity. For each subject the work will focus on different specific enzymatic activities of industrial relevance.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

1,999,995.00

PROJECT N°

227279

DURATION

36 months

PROJECT START DATE

April 2009

LIST OF PARTNERS

1. UNIVERSITA DEGLI STUDI DI TRIESTE (IT)
2. KUNGLIGA TEKNISKA HOEGSKOLAN (SE)
3. KØBENHAVNS UNIVERSITET (DK)
4. TECHNISCHE UNIVERSITEIT DELFT (NL)
5. NOVOZYMES A/S (DK)
6. THE NATIONAL UNIVERSITY OF UZBEKISTAN NAMED AFTER MIRZO ULUGBEK (UZ)
7. BELOZERSKY INSTITUTE OF PHYSICO-CHEMICAL BIOLOGY (RU)
8. B.P.KONSTANTINOV PETERSBURG NUCLEAR PHYSICS INSTITUTE RUSSIAN ACADEMY OF SCIENCES (RU)
9. SHEMYAKIN AND OVCHINNIKOV INSTITUTE OF BIOORGANIC CHEMISTRY. RUSSIAN ACADEMY OF SCIENCE (RU)
10. MOLECULAR TECHNOLOGIES (RU)
11. BIO/ TECHNOLOGIES, INNOVATIONS, RESEARCHES LTD (RU)

FP7-KBBE-2008-2B

In silico Rational Engineering of Novel Enzymes

IRENE

www.irene-fp7.eu



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-3 Industrial biotechnology: novel high added-value bio-products and bio-processes

KBBPPS



Support to standardisation for bio-based products

The application of standards and certification systems in the European bio-based product industry has positive long-term effects on the overall development of bio-based product markets. Trade barriers are reduced and the development of a pan-European market for bio-based products is promoted. Finally, public acceptance of bio-based products is increased through ensuring and verifying the sustainable sourcing of raw materials, the effective bio-content and clear indication of their (comparative) functionality in relation to the regular products. The KBBPPS project aims at increasing the uptake speed of standards and certification systems for bio-based products.

This project covers research and demonstration on bio-based carbon content determination, biomass content methods not solely dependent on 14C-analysis and biodegradability and ecotoxicity test schemes. Next, identification and resolution of functionality related bottlenecks with the view to developing, harmonising and validating test methodologies will be undertaken. On one side the needs and possibilities will be studied from a holistic viewpoint of element depletion by human use of resources in the future and from an overall industry perspective when covering all bio-based materials, intermediates and products. On the other side practical solutions for stakeholders, lab and field tests on for instance sampling, biodegradation or biological derived elements will be investigated. The goal in the end is that the results can be copied one-to-one into European standards.

Following Mandates by the EC, the European Standardization Committee initiated a Technical Committee, CEN/TC 411. on "Bio-based products". By participating in this committee (its Secretariat being one of the partners) and by doing pre- and co-normative research for them, KBBPPS will allow the European stakeholders to progress with well-defined, sound test methods correlated to actual field behaviour and applicability in the lab.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,994,223.00

PROJECT N°

312060

DURATION

36 months

PROJECT START DATE

August 2012

LIST OF PARTNERS

1. STICHTING NEDERLANDS NORMALISATIE. INSTITUUT (NL)
2. STICHTING ENERGIEONDERZOEK CENTRUM NEDERLAND (NL)
3. UNIVERSITY OF YORK (UK)
4. NOVA-INSTITUT FÜR POLITISCHE UND ÖKOLOGISCHE INNOVATION GMBH (DE)
5. ORGANIC WASTE SYSTEMS NV (BE)
6. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
7. AGRICULTURAL UNIVERSITY OF ATHENS (EL)

FP7-KBBE-2012-6-singlestage

Knowledge Based Bio-based Products' Pre-Standardization

KBBPPS

Website not available yet



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-3 Industrial biotechnology: novel high added-value bio-products and bio-processes

KYROBIO



Biocatalysis for chiral compounds

The KYROBIO project will broaden the toolbox of industrial chiral chemicals produced as single enantiomers by biotechnology routes using a supradisciplinary approach ranging from enzyme development, fermentation and innovative isolation techniques. It is expected that promising candidate chemicals will be commercialised within three years of completion and so scale up with economic and feasibility studies that are also key technology developments. The consortium includes a strong presence from SMEs including SME leadership which ensures multiple routes to market for this project. Main targets are applications of lyases to commercial targets and the use of synthetic biology to amend or improve a fermentation process in order to generate better enzymes. In particular biocatalytic transformations giving selective and complex multiple chiral centres are targeted. We expect to develop a green alternative biotechnology to chemocatalysts with reduced use of organic solvents, efficient use of reagents and elimination of metal catalysts.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,663,303.00

PROJECT N°

289646

DURATION

48 months

PROJECT START DATE

December 2011

LIST OF PARTNERS

1. C-TECH INNOVATION LIMITED (UK)
2. EVOCATAL GMBH (DE)
3. BICT SRL (IT)
4. INGENZA LIMITED (UK)
5. CLEA TECHNOLOGIES BV (NL)
6. BIOINNOVATION INSTITUTE (PL)
7. PROZOMIX LIMITED (UK)
8. VTU TECHNOLOGY TECHNOLOGIE-ENTWICKLUNGSGESELLSCHAFT MBH (AT)
9. X-ZYME GMBH (DE)
10. BIO-PRODUCT BV (NL)
11. ACIB GMBH (AT)
12. UNIVERSITAET GRAZ (AT)
13. THE UNIVERSITY OF MANCHESTER (UK)
14. RIJKSUNIVERSITEIT GRONINGEN (NL)
15. UNIVERSITAET STUTTGART (DE)
16. DANMARKS TEKNISKE UNIVERSITET (DK)
17. CHEMISTRY INNOVATION LIMITED (UK)

FP7-KBBE-2011-5

KYROBIO

The discovery, development and demonstration of biocatalysts for use in the industrial synthesis of chiral chemicals.

www.kyrobio.eu


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-3 Industrial biotechnology: novel high added-value bio-products and bio-processes

LAPTOP



Novel industrial microorganisms with optimised metabolic pathways

The focus of this proposal is to develop an economically viable production process for the lantibiotic NAI-107, a new antibiotic with the potential to treat life-threatening infections caused by multidrug-resistant Gram-positive pathogens. NAI-107 is produced by fermentation of the actinomycete *Microbispora* sp., is undergoing formal toxicology studies and is expected to enter Phase I clinical trials in the second half of 2009. NAICONS, an SME participating in the project and acting as coordinator, is developing NAI-107. A challenge in advancing a new antibiotic into clinical development is to devise a production process that will deliver a high quality compound at reasonable yields. This is particularly relevant for NAI-107 since no lantibiotics are industrially produced as drugs for human use and there are no examples of industrial use of *Microbispora*. The development of a robust and economically feasible production process for NAI-107 requires the integration of basic knowledge of the physiology of the strain which can be best obtained by a combination of classical and post-genomic approaches (proteome/transcriptome), with a detailed knowledge of the production process and its scalability to industrial level. This will be achieved by flux analyses and 2D-maps for discovering primary metabolism proteins up-regulated during antibiotic production. Combined with a study of other limiting steps, such as precursor uptake, product excretion and the intrinsic resistance of the producing strain, and with analysis of the transcriptional regulation of the NAI-107 biosynthetic genes, bottlenecks in production will be identified and bypassed by metabolic engineering leading to an optimized metabolic pathway for the production of this life-saving antibiotic and an efficient production process utilizing a high producing strain, an improved production medium and an efficient recovery process.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,775,536.00

PROJECT N°

245066

DURATION

36 months

PROJECT START DATE

July 2010

LIST OF PARTNERS

1. NEW ANTI-INFECTIVE CONSORTIUM (IT)
2. JOHN INNES CENTRE (UK)
3. DANMARKS TEKNISKE UNIVERSITET (DK)
4. UNIVERSITA DEGLI STUDI DI PALERMO (IT)
5. UNIVERSITAETSKLINIKUM BONN (DE)
6. EBERHARD KARLS UNIVERSITAET TUEBINGEN (DE)
7. GNOSIS SPA (IT)

FP7-KBBE-2009-3

LAPTOP

LAntibiotic Production: Technology, Optimization and improved Process

www.jic.ac.uk/laptop

ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-3 Industrial biotechnology: novel high added-value bio-products and bio-processes

LIPOYEASTS



Lipid enzymes - Development of enzymes for lipid modification and activation

This proposal aims at developing a versatile fermentation platform for the conversion of lipid feed stocks into diverse added-value products. It is proposed to develop the oleaginous yeast *Yarrowia lipolytica* into a microbial factory by directing its versatile lipid metabolism towards the production of industrially valuable compounds like wax esters (WE), polyhydroxyalkanoates (PHA's), free hydroxyl fatty acids (HFA's) and isoprenoid-derived compounds (carotenoids, polyenic carotenoid ester). Conversion of lipid intermediates into these products will be achieved by introducing heterologous enzyme functions isolated from marine hydrocarbonoclastic bacteria into *Yarrowia*.

To achieve these goals we have assembled a team with a broad set of complementary expertise in microbial physiology, metabolic engineering, yeast lipid metabolism, metagenomics, biochemical and protein engineering. Already available for this project are a number of genetically engineered *Yarrowia* strains as well as a collection of genes encoding enzymes for the production of WE's, 3-HFA's, PHA's and carotenoids. The following complementary research focus areas are proposed: (1) Engineering of metabolic precursor pools in *Yarrowia lipolytica* for the production of added-value products from lipids (INRA, UGe). (2) Conversion of metabolic precursor pools in *Yarrowia* to added-value products by overexpressing heterologous biosynthetic enzymes (UGe, INRA, UoM). (3) Discovery and characterization of novel aliphatic enzyme activities by metagenomic screening of marine hydrocarbonoclastic and other oil- and fat-metabolizing microbial communities (TUBS, UoN). The project is further complemented by: (i) the activity of a professional valorization company (Ascenion) providing IP protection and commercialization services; (ii) by proactive efforts to expand the project's target products' application potential (Avecom).

PROJECT COORDINATOR

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- UNIVERSITEIT GENT (BE)

FUNDING SCHEME

CP

EC CONTRIBUTION €

911,111.00

PROJECT N°

213068

DURATION

36 months

PROJECT START DATE

August 2008

LIST OF PARTNERS

1. UNIVERSITEIT GENT (BE)
2. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (INRA) (FR)
3. TECHNISCHE UNIVERSITAET BRAUNSCHWEIG (DE)
4. UNIVERSITY OF NAIROBI (KE)
5. UNIVERSITY OF MINNESOTA (US)
6. AVECOM N.V. (BE)
7. ASCENION GMBH (DE)

Mobilising the enzymatic potential of hydrocarbonoclastic bacteria and the oleaginous yeast *Yarrowia lipolytica* to create a powerful cellular production platform for lipid-derived industrial materials

FP7-KBBE-2007-1

LIPOYEASTS

www.lipoyeasts.ugent.be




ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-3 Industrial biotechnology: novel high added-value bio-products and bio-processes

NOVOSIDES

Robust and novel biocatalysts for industrial applications

This project aims to develop novel biocatalysts for the production of glycosides (NOVOSIDES). Glycosylated compounds have a wide range of applications, but very few enzymes are able to glycosylate small organic molecules cost-efficiently at the industrial scale. Therefore, glycosylation reactions catalysed by transglycosidases, glycoside phosphorylases and glycoside hydrolases will be explored in more detail. These enzymes catalyze the transfer a glycosyl group from a cheap and readily available donor substrate to a variety of acceptors. To exploit their full potential, the enzymes' specificity and stability against high temperatures and the presence of organic co-solvents will be optimised by means of directed evolution.

A large and diverse collection of enzymes will first be established by screening in natural environments and by the mining of public (meta)genome databases. The enzyme collection will then be screened for activity on a variety of representative acceptors from different chemical classes. This will allow the identification of the most promising enzymes for optimisation through semi-rational and random mutagenesis. The high-throughput screening of natural and variant enzymes will be performed with newly developed fluorescent probes, that allow fast and accurate measurements of carbohydrate-active enzymes in a direct and non-destructive assay.

To achieve these ambitious goals, a complementary consortium of academia and industry has been formed that covers the whole range of required expertises. The economical potential of our technology will be demonstrated by the development and scale-up of selected glycosylation reactions at pilot-plant facilities. The produced glycosides will be actively marketed to potential end-users to promote the valorisation of the project's results and to initiate future collaborations on novel target compounds.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,684,830.00

PROJECT N°

265854

DURATION

48 months

PROJECT START DATE

December 2010

LIST OF PARTNERS

1. UNIVERSITEIT GENT (BE)
2. MIKROBIOLOGICKY USTAV, AVCR, V.V.I. (CZ)
3. RIJKSUNIVERSITEIT GRONINGEN (NL)
4. FRIEDRICH-SCHILLER-UNIVERSITAET JENA (DE)
5. BIO BASE EUROPE PILOT PLANT VZW (BE)
6. CARBOSYNTH LIMITED (UK)

FP7-KBBE-2010-4

Novel Biocatalysts for the Production of Glycosides

NOVOSIDES

www.novosides.ugent.be



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-3 Industrial biotechnology: novel high added-value bio-products and bio-processes

OXYGREEN



Designer enzymes - Improved biocatalysts for bioprocesses

Enzymes are extremely powerful natural catalysts able to perform almost any type of chemical reaction while being mild by nature and highly specific. In fact, the delicate functioning of enzymes forms the basis of every living creature. The catalytic potential of enzymes is more and more appreciated by the industry as many industrial processes rely on these sophisticated catalysts. However, the number of reactions catalyzed by enzymes is restricted as enzymes only have evolved to catalyze reactions that are physiologically relevant. Furthermore, enzymes have adapted to the direct (cellular) environment in which they have to function (e.g. operative at ambient temperature, resilient towards proteolysis, catalytic turnover rate should fit with metabolic enzyme partners). This excludes the existence of enzymes that do not fit within boundaries set by nature. It is a great challenge to go beyond these natural boundaries and develop methodologies to design 'unnatural' tailor-made enzymes. Ideally it should become possible to (re)design enzymes to convert pre-defined substrates. Such designer enzymes could theoretically exhibit unsurpassed catalytic properties and, obviously, will be of significant interest for industrial biotechnology.

The OXYGREEN project aims at the design and construction of novel oxygenating enzymes (designer oxygenases) for the production of compounds that can be used in medicine, food and agriculture and the development of novel powerful and generic enzyme redesign tools for this purpose. The enzymes and whole-cell biocatalysts that will be developed should catalyze the specific incorporation of oxygen to afford synthesis of bioactive compounds in a selective and clean way, with minimal side products and with no use of toxic materials. For this, generic platform technologies (novel high-throughput methodology and methods for engineering dedicated host cells) will be developed that allow effective structure-inspired directed evolution of enzyme.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,543,249.00

PROJECT N°

212281

DURATION

60 months

PROJECT START DATE

May 2008

LIST OF PARTNERS

1. RIJKSUNIVERSITEIT GRONINGEN (NL)
2. JACOBS UNIVERSITY BREMEN GMBH (DE)
3. TECHNISCHE UNIVERSITAET DORTMUND (DE)
4. BIOINFORMBANK INSTITUTE (PL)
5. TECHNISCHE UNIVERSITAET WIEN (AT)
6. TECHNISCHE UNIVERSITAET GRAZ (AT)
7. UNIVERSITA DEGLI STUDI DI PAVIA (IT)
8. DSM RESEARCH B.V. (NL)
9. EVONIK REXIM (FR)
10. BIOLOG LIFE SCIENCE INSTITUTE, FORSCHUNGLABOR UND BIOCHEMICAL-VERTRIEB GMBH (DE)
11. ENZYSCREEN (NL)
12. DECHEMA GESELLSCHAFT FUER CHEMISCHE TECHNIK UND BIOTECHNOLOGIE E.V. (DE)
13. RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN (DE)

FP7-KBBE-2007-1

OXYGREEN

Effective redesign of oxidative enzymes for green chemistry

www.rug.nl/oxygreen/project

ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-3 Industrial biotechnology: novel high added-value bio-products and bio-processes

PEROXICATS



Robust and novel biocatalysts for industrial applications

Enzymes catalyzing redox reactions (oxidoreductases) represent an environmentally-friendly alternative to harsh chemicals in many industrial processes that include oxidative transformations for the production of bulk and fine chemicals, including pharmaceuticals. However, compared with hydrolases, the industrial penetration of these enzymes is still low due to several limitations. Firstly, microbial oxidoreductases involved in biomass transformation were discovered much more recently than the corresponding hydrolases. Secondly, the use of the already known and to be discovered oxidoreductases as biocatalysts often requires tuning their catalytic and operational properties to the requirements of the industrial transformations. Therefore, the PEROXICATS project will focus first on the search for new peroxidases of interest, from singular micro-organisms, for developing industrial biocatalysts. The huge amount of genomic resources available nowadays, and those generated during the lifetime of the project, will be exploited in the search for novel enzymes. On the other hand, we will address some of the main issues presently limiting the industrial application of fungal peroxidases/peroxygenases (such as suicide inactivation by peroxide, low functional expression and limited oxygen transfer potential) and we will modulate their catalytic properties when required, by a combination of rational and non-rational design (based on directed and random mutagenesis, respectively, in combination with high-throughput screening methods). Both the enzyme search and engineering studies and the evaluation of their industrial interest will be possible because of the expertises put together in the PEROXICATS consortium, which combines four academic partners with strong and complementary background in the discovery, structure-function, improvement and application of oxidoreductases, the world-leading company in industrial enzymes, and a SME specialized in unusual fungal enzymes.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,350.00

PROJECT N°

265397

DURATION

36 months

PROJECT START DATE

December 2010

LIST OF PARTNERS

1. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
2. NOVOZYMES A/S (DK)
3. INTERNATIONALES HOCHSCHULINSTITUT ZITTAU (DE)
4. JENABIOS GMBH: UMWELTBIOTECHNOLOGIEN & SERVICELEISTUNGEN (DE)

FP7-KBBE-2010-4

PEROXICATS

Novel and more robust fungal peroxidases as industrial biocatalysts

www.peroxicats.org


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-3 Industrial biotechnology: novel high added-value bio-products and bio-processes

POLYMODE



Novel enzymes – The search for novel enzymes and micro-organisms for different bioprocesses

The PolyModE project convenes an international, interdisciplinary, and intersectorial consortium to identify, characterise, and optimise novel polysaccharide modifying enzymes, and to develop robust fermentation strategies for their large-scale production, to exploit the potential of biopolymers for food, pharmaceutical, cosmetic, and technical applications. We have selected the six complex carbohydrates with the highest current market share or expected future market potential, namely alginate, carrageenan, chitosan, glycosaminoglycan, pectin, and xanthan gum. For each of these, the industrial partners have identified those enzymes which will answer to the most pressing needs or offer the most promising potential for improved production of polysaccharides with novel physico-chemical properties and biological functionalities. Primary targets will be alginate epimerases, carrageenan sulfatases, chitosan de-acetylases, glycosaminoglycan sulfatases, pectin de-acetylases, and xanthan gum de-acetylases. These enzymes together with secondary target enzymes, e.g. sequence specific lyases and hydrolases, will allow the generation and analysis of polymers and oligomers with novel, non-random patterns of modification. Two parallel approaches will be followed for each type of polysaccharide modifying enzyme, namely a knowledge-based genomic approach and a broad, un-biased metagenomic approach, e.g. using soil or sludge samples with a history of contact with the polysaccharide in question. A pipeline of three levels of fermentation systems will be established, ranging from lab-scale innovative expression systems with features shaped according to the specific characteristics of our target enzymes, through medium-scale, novel and unusual fermentation systems provided by a number of SME with highly specialised knowledge and expertise in developing and using such systems, to the established large-scale fermentation systems and facilities of market leaders in White Biotechnology.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,948.00

PROJECT N°

222628-2

DURATION

48 months

PROJECT START DATE

May 2009

LIST OF PARTNERS

1. WESTFAELISCHE WILHELMS-UNIVERSITAET MUENSTER (DE)
2. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
3. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS) (FR)
4. WAGENINGEN UNIVERSITEIT (NL)
5. SVERIGES LANTBRUKSUNIVERSITET (SE)
6. THE STEPHAN ANGELOFF INSTITUTE OF MICROBIOLOGY, BULGARIAN ACADEMY OF SCIENCES (BG)
7. DANISCO A/S (DK)
8. SANOFI-AVENTIS RECHERCHE & DEVELOPPEMENT (FR)
9. GILLET CHITOSAN EUROL (FR)
10. GENEART AG (DE)
11. LIBRAGEN (FR)
12. ARTES BIOTECHNOLOGY GMBH (DE)
13. GTP TECHNOLOGY SA (FR)
14. LYON INGENIERIE PROJETS (FR)
15. PETRA TEWES-SCHWARZER. CARE SENSE CONSULTING (DE)

FP7-KBBE-2007-2A

POLYMODE

Novel Polysaccharide Modifying Enzymes to Optimise the Potential of Hydrocolloids for Food and Medical Applications

www.polymode.eu


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-3 Industrial biotechnology: novel high added-value bio-products and bio-processes

ROBOYEAST



Cellular, metabolic and genetic engineering for novel compounds

Fast developments in synthetic biology now enable introduction of entire novel-to-nature pathways into industrial microorganisms, thus opening the door to a novel bio-based industry. However, successful scale-up of novel-to-market products from bench-top proof-of-principle to full-scale processes requires a profound understanding of cellular and sub-cellular mechanisms and their interaction with industrial process conditions. In particular, successful industrial production requires optimal performance of engineered strains under the dynamic, slow-growth process conditions that occur in large-scale industrial bioreactors. These differ strongly from the conditions in conventional laboratory analysis.

The RoBoYeast project aims to reduce time-to-market and to improve productivity of microbial synthetic pathways by identifying key physiological and molecular determinants of performance under industrially relevant conditions and to integrate these at an early stage in strain development programs. The project is characterized by multi-scale analysis and integration of results from industrial-scale into lab-scale studies.

RoBoYeast aims to improve productivity and cellular robustness in large-scale fermentations of the novel-to-nature production in *Saccharomyces cerevisiae* of arachidonic and eicosapentaenoic acid, two health-promoting poly-unsaturated fatty acids with excellent market perspectives as nutraceuticals. Biosynthetic pathways of these compounds are energy (ATP) intensive, which adds on the challenge of constructing robust strains that withstand typical production stresses without loss of productivity and product yield. To accelerate project progress, key findings of a likewise challenging resveratrol project, already developed by the SME partner, can be used. RoBoYeast intends to identify and improve robustness mechanism not only for the benefit of this project but also as a blueprint for optimization of the production of other ATP-intensive products.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,071,347.00

PROJECT N°

289137

DURATION

36 months

PROJECT START DATE

October 2011

LIST OF PARTNERS

1. UNIVERSITAET STUTT GART (DE)
2. TECHNISCHE UNIVERSITEIT DELFT (NL)
3. FLUXOME SCIENCES A/S (DK)

FP7-KBBE-2011-5

ROBOYEAST

Robustness of Yeast Strains and Bioprocesses for Industrial Production of Novel Compounds

www.roboyeast.eu



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-4 Biorefinery

APROPOS



BioWASTE - Novel biotechnological approaches for transforming industrial and/or municipal biowaste into bioproducts – SICA

The focus of APROPOS is to develop novel eco-efficient bio-mechanical processing solutions to enrich intermediate fractions from industrial high protein and oil-containing process residues originating from agriculture and fisheries. Enzyme-aided modification steps are developed for the intermediate fractions to obtain value-added nutritive and bio-active components, chemical as well as functional bio-materials suitable for exploitation in food, skin care, wound healing, bio-pesticide and soil improvement product applications. Mentioned residues are voluminous in Europe and globally significant. Zero waste concepts to be developed aim at avoidance of unnecessary purification of the components, establishment of local and distributed processing units in connection with the primary production and new business opportunities essentially for SMEs in Europe and beyond. An emphasis is directed to East Africa and India to support their needs to process local residues to components directed to nourish infants and fight against pests, respectively, in rural areas of both regions. The success of technological developments will be assessed in terms of economical feasibility, raw material efficiency and environmental impacts. The assessment will also include study on how the developed residue producer-end use value chain will affect the existing value chain from the residue producer to feed or energy. The multidisciplinary research group and cross-industrial SME group together cover the whole value chain from residue producers and processors to various end-users. The expertises of the partners include crop and fish processing, process hard ware manufacture, mechanical, chemical and biotechnical biomaterial processing, biomaterial up-grading and analytics, enzyme technology, end-product applications, assessment of eco-efficiency and value chains, technology transfer and commercialization. Feasibility of the developed processes is verified by demonstrations.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,874,468.00

PROJECT N°

289170

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
2. UNIVERSITAT POLITECNICA DE CATALUNYA (ES)
3. IGV INSTITUT FÜR GETREIDEVERARBEITUNG GMBH (DE)
4. SINTEF FISKERI OG HAVBRUK AS (NO)
5. MANITOBA AGRI-HEALTH RESEARCH NETWORK INC CORP (CA)
6. UNIVERSITY OF NAIROBI (KE)
7. THE ENERGY AND RESOURCES INSTITUTE (IN)
8. ALEKSANDRO STULGINSKIO UNIVERSITETAS (LT)
9. NUTRIMAR AS (NO)
10. SYBIMAR OY (FI)
11. KANKAISTEN OELJYKASVIT OY (FI)
12. LASTING SOLUTIONS LTD (UG)
13. MECPRO HEAVY ENGINEERING PRIVATE LIMITED (IN)
14. TRUE COSMETICS SL (ES)
15. TEXTIL PLANAS OLIVERAS SA (ES)
16. KROPPENSTEDTER OLMUHLER WALTER DOPELHEUER GMBH (DE)
17. ECOFOSTER GROUP OY (FI)

FP7-KBBE-2011-5

APROPOS

Added value from high protein & high oil industrial co-streams

www.euapropos.eu



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-4 Biorefinery

BIOCONSEPT



Towards a sustainable bio-industry - Biotechnology for renewable chemicals and innovative downstream processes

BioConSepT aims to demonstrate the technical feasibility of White Biotech processes for the conversion of 2nd generation biomass into platform chemicals, which are 30% cheaper and 30% more sustainable than existing chemical routes or 1st generation processes. BioConSepT uses lignocellulose and non-edible oils & fats as cheap, abundantly available feedstocks, which cannot be used as food. The main achievements expected for BioConSepT are: (1) to develop the robust enzymes and micro-organisms suited for the more dirty 2nd generation feedstocks; (2) to reduce equipment costs and the number of process steps by the integration of bioconversion and highly selective separation technologies; (3) to facilitate easy integration in existing production chains by deploying combinations of bio- and chemical conversions and by proving the suitability of the produced platform chemicals for bio-based polymers, resins, plasticizers, solvents and surfactants and (4) by realisation of the 1st demonstration of integrated production chains from 2nd generation feedstocks to platform chemicals at industrially relevant scale. BioConSepT will bring novel technologies from lab to pilot scale by high level applied research. The consortium consists of 15 SMEs (suppliers of equipment, bioconversions, separation technologies and services), 10 large industrial parties (producers, end-users, engineering and consultancy companies) and 5 leading RTOs from 11 different countries. The large industrial parties and SMEs expect new products, processes, services and customers with a potential value of hundreds of M€. BioConSepT will reduce the total processing costs and thus improve the competitiveness of the European agro/food and chemical industries. The use of renewable biomass will lead to a significant reduction of Green House Gas emissions and a more secure supply of feedstocks, energy and water as well as reduction of waste generation.

FP7-KBBE-2011-5

BIOCONSEPT



Integration of Bio-Conversion and Separation Technology for the production and application of platform chemicals from 2nd generation biomass

www.bioconsept.eu/


PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

8,888,371.00

PROJECT N°

289194

DURATION

48 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK. TNO (NL)
2. VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. (BE)
3. FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG EV (DE)
4. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
5. RAINER DR. BUSCH (DE)
6. ARCHER DANIELS MIDLAND EUROPE BV (NL)
7. EVONIK INDUSTRIES AG (DE)
8. ACONDICIONAMIENTO TARRASENSE ASSOCIACION (ES)
9. NOVAMONT SPA (IT)
10. POYRY MANAGEMENT CONSULTING OY (FI)
11. PROVIRON HOLDING NV (BE)
12. RHODIA OPERATIONS (FR)
13. SUD CHEMIE AG (DE)
14. TAMINCO NV (BE)
15. APPLIKON BIOTECHNOLOGY BV (NL)
16. ARQUEBIO SL (ES)
17. BIRD ENGINEERING BV (NL)
18. CLEA TECHNOLOGIES BV (NL)
19. DESIGNER ENERGY LTD (IL)
20. DRACOSA AG (DE)
21. EUCODIS BIOSCIENCE GMBH (AT)
22. GTVT S.R.O (SK)
23. QNORM QUALITAT I MEDI AMBIENT SL (ES)
24. DR. STEPHEN MATTHEW WEBB (AT)
25. SUNILEI TECNOLOGIA SOLAR SA (ES)
26. TYGRON SERIOUS GAMING BV (NL)
27. WEASTRA SRO (SK)
28. ZENA SRO (CZ)

ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-4 Biorefinery

BIOWASTE4SP



Conversion of bio-waste in developing countries – SICA (African ACP, Mediterranean Partner Countries)

The project will develop environmentally appropriate and socio-economically sustainable biotechnological processes for converting biodegradable fractions of identified African and Mediterranean agricultural and industrial waste as well as fractions of municipal and animal solid waste into food, feed, value-added products for nutraceuticals and healthcare, biogas and organic based fertilizer. Integrated processes will combine sugar conversion from mainly amylopectins and starchy materials into proteins (for food and feed) with biogas and fertilizer production done in co-digestion of municipal solid waste and manure. Left over sugars from protein production will be used to produce specialty bacterial to upgrade the fertilizer and for fruit waste storage and food conservation. The technologies to be developed will rely on simple and locally available equipment and naturally occurring microorganisms. Life cycle analysis and socio-economic studies will be undertaken to ensure local applicability in the target countries.

The project will contribute to the achievement of the Millennium Development Goals by improving the management of biowastes in developing countries and thus reducing their potential adverse impacts on human and animal health, the environment and the economy. With partners from Africa, Asia, Europe and the Middle East, the project also provides an opportunity for EU researchers and third country partners to network and share experiences and best practices. The involvement of small- and medium sized enterprises will contribute to EU's industrial competitiveness by exposing them to new markets and new product opportunities from waste utilization. Research activities will be accompanied by proof of concept at SMEs and demonstrations by local communities and NGOs. Exchange of best practices and knowledge-sharing among project partners will be emphasised.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,992,555.00

PROJECT N°

312111

DURATION

36 months

PROJECT START DATE

September 2012

LIST OF PARTNERS

1. TEKNOLOGISK INSTITUT (DK)
2. IVL SVENSKA MILJÖINSTITUTET AB (SE)
3. TURKIYE BILIMSEL VE TEKNOLOJİK ARASTIRMA KURUMU (TR)
4. SIRIM BERHAD (MY)
5. COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (GH)
6. COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (ZA)
7. THE AGRICULTURAL RESEARCH CENTER (EG)
8. UNIVERSITA' DEGLI STUDI DI SIENA (IT)
9. INSTITUT AGRONOMIQUE ET VETERINAIRE HASSAN II (MA)
10. DANMARKS TEKNISKE UNIVERSITET (DK)
11. ETHEKWINI MUNICIPALITY (ZA)
12. MALAYSIAN AGRI HI TECH SDN BHD (MY)
13. BIOVELOP INTERNATIONAL AB (SE)
14. ASSOCIATION MAROCAINE DES DECHETS SOLIDES (MA)
15. AFRICAN INSTITUTE FOR CAPACITY DEVELOPMENT (KE)
16. WORLD ASSOCIATION OF INDUSTRIAL AND TECHNOLOGICAL RESEARCH ORGANIZATIONS (MY)

FP7-KBBE-2012-6-singlestage

BIOWASTE4SP



Turning biowaste into sustainable products: development of appropriate conversion technologies applicable in developing countries

Website not available yet





ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-4 Biorefinery

BRIGIT

Biotechnology for novel biopolymers

BRIGIT aims to develop a cost-competitive and environmentally friendly continuous process to produce biopolymers (polyhydroxybutyrate, PHB, and succinate-based biopolyesters, PBS-Poly-Butylene-Succinate) from waste-derived lignocellulosic sugar feedstock liquor of wood sulphite pulping process based on “in-situ” fermentation process and new fermentation culture technology without alteration of the quality of current lignosulphonates (they have a high market demand as additive). Other non-wood plant waste, used nowadays in the pulp production, will be also considered as alternative sugar source in this project.

In comparison with previous projects to obtain biopolymers from different sources, the main innovation in BRIGIT is the use of an existing sugar-rich waste stream and the process integration with the existing industrial operation, that will permit an overall reduction in resource consumption and in greenhouse gas emissions and a dramatic reduction of operational costs due to the use of non-sterile steps, without the need of intermediate discontinuous bioreactors and avoiding waste transport.

BRIGIT aims to develop bio-based composites for high-tech fire-resistant applications. The use of these biopolymers in combination with natural fabrics (flax, hemp,...) will be mainly in the passenger and goods transport sector (aeronautics, train, buses, shipping, trucks,...) as an alternative to 3D sandwich panels made from thermoset resins reinforced with continuous glass fibres with high fire resistance. The new panels will be recyclable, lighter, with a broad processing windows, high production capacity (using a continuous compression moulding process) and low embodied energy in comparison with current panels that are heavy, non-recyclable, have narrow processing windows, low production capacity, dirty process with high production of waste and based on materials with high embodied energy.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,618,296.00

PROJECT N°

311935

DURATION

48 months

PROJECT START DATE

August 2012

LIST OF PARTNERS

1. ASOCIACION DE INVESTIGACION DE MATERIALES PLASTICOS Y CONEXAS. AIMPLAS (ES)
2. LUNDS UNIVERSITET (SE)
3. UNIVERSIDAD DE CANTABRIA (ES)
4. BIOTREND. INOVACAO E ENGENHARIA EM BIOTECNOLOGIA SA (PT)
5. SILICOLIFE LDA (PT)
6. AGRICULTURAL UNIVERSITY OF ATHENS (EL)
7. AVECOM N.V. (BE)
8. BANGOR UNIVERSITY (UK)
9. NEXTEK LIMITED (UK)
10. DAREN LABORATORIES & SCIENTIFIC CONSULTANTS LTD (IL)
11. GREEN SOURCE SA (ES)
12. ADDCOMP HOLLAND BV (NL)
13. PROFORM IPARI ÉS KERESKEDELMI KFT. (HU)
14. XPERION AEROSPACE GMBH (DE)
15. SOLARIS BUS & COACH S.A. (PL)
16. CENTRO RICERCHER FIAT SCPA (IT)

FP7-KBBE-2012-6-singlestage

BRIGIT



New tailor-made biopolymers produced from lignocellulosic sugars waste for highly demanding fire-resistant applications

Website not available yet



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-4 Biorefinery

CHIBIO



BioWASTE - Novel biotechnological approaches for transforming industrial and/or municipal biowaste into bioproducts – SICA

The fishing industry in the EU and elsewhere produces an increasing mass of negative value crustacean shell waste (>6 MTPA), whose current disposal in landfills results in significant costs and risks to human health as well as to the environment. While in Asia small amounts of shrimp waste are processed to chitosan, the high CaCO₃ content of EU crab shell waste has prevented cost effective conversion to value adding products. The project will develop an integrated biorefinery platform transforming the chemical constituents of EU, African and Asian crustacean shell waste into “drop-in” and novel chemical intermediates to produce high value, high performance bio-based polymers at high atom efficiencies. The innovative process comprises pretreatment steps to facilitate downstream enzymatic depolymerisation and conversion of sugars into chemical building blocks utilizing enzymatic and whole-cell biocatalysis routes. Biocatalyst development requires application of genomics techniques in combination with green-chemical and process-engineering know-how. Sustainable purification technologies will enable integration of monomers into current industrial polymerization processes. Biowaste streams will be valorised for the production of bioenergy to improve process efficiency and greenhouse gas footprint. The environmental impact of the process chain will be evaluated by a cradle-to-product life cycle analysis. Process scale-up will be linked with modelling and optimization studies to demonstrate economic viability. The consortium of 5 academic, 4 SME and 2 large industrial partners has the technical and management expertise to rapidly transfer laboratory scale results into novel industrial product lines at an accelerated pace. Key consortium members are from 5 different EU and 2 associated ICP states, which allows for strategic technology transfer from high- to low-tech driven countries, fostering the development of sustainable economies in the EU and beyond.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,904,425.00

PROJECT N°

289284

DURATION

36 months

PROJECT START DATE

November 2011

LIST OF PARTNERS

1. FRAUNHOFER-GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V (DE)
2. TECHNISCHE UNIVERSITAET MUENCHEN (DE)
3. LETTERKENNY INSTITUTE OF TECHNOLOGY (IE)
4. UNIVERSITETET FOR MILJO OG BIOVITENSKAP (NO)
5. INSTITUT NATIONAL DES SCIENCES ET TECHNOLOGIES DE LA MER (TN)
6. APRONEX S.R.O (CZ)
7. EARAGAIL EISC TEORANTA (IE)
8. EVONIK INDUSTRIES AG (DE)
9. SUD CHEMIE AG (DE)
10. ENERGIEINSTITUT AN DER JOHANNES KEPLER UNIVERSITAT LINZ GMBH (AT)
11. BIOTECH SURINDO PT (ID)

FP7-KBBE-2011-5

CHIBIO



Development of an integrated biorefinery for processing chitin rich biowaste to specialty and fine chemicals

www.chibiofp7.fraunhofer.de





ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-4 Biorefinery

DISCO

Lignocellulosic enzymes - Development of cellulases for lignocellulosic biomass pre-treatment

The aim of the proposed DISCO project is to develop more efficient and therefore more cost-effective cellulosic and hemicellulosic enzyme tools for the enhanced hydrolysis of pre-treated lignocellulosic biomass in simultaneous saccharification and fermentation (SSF) conditions for bioethanol production. The focus will be on enzymes having increased catalytic activity on various types of relevant European lignocellulosic biomass. In addition enzymes with lower affinity for lignin shall also be developed. Such enzymes would increase the effective amount of cellulases/ hemicellulases for cellulose hydrolysis. Furthermore the recycling of these enzymes would be applicable. The approach in this proposal is to discover the desired activities by combining classical and modern screening technologies. The enzymes will be produced in suitable host systems for industrial enzyme production. The project also focuses on elucidation of enzymatic hydrolysis mechanisms, about which there is a paucity of knowledge. The project will determine the limiting structural factors in these mechanisms by characterisation of the substrate during the course of the hydrolysis and the remaining recalcitrant residue. Synergy between different cellulase and hemicellulases components will also be addresses on the chosen lignocellulosic substrates. Furthermore, the project seeks to demonstrate the proof of concept with the cellulolytic enzymes in a pilot scale using the most relevant European feedstock pretreated wheat straw and related high-volume co-products.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,985,845.00

PROJECT N°

211863

DURATION

48 months

PROJECT START DATE

August 2008

LIST OF PARTNERS

1. TEKNOLOGIAN TUTKIMUSKESKUS (VTT) (FI)
2. WAGENINGEN UNIVERSITEIT (NL)
3. INSTITUTE OF FOOD RESEARCH (UK)
4. HELSINGIN YLIOPISTO (FI)
5. A.N. BAKH INSTITUTE OF BIOCHEMISTRY OF THE RUSSIAN ACADEMY OF SCIENCES (RU)
6. BUDAPESTI MUSZAKI ES GAZDASAGTUDOMANYI EGYETEM (HU)
7. DYADIC NEDERLAND BV (NL)
8. BIOGOLD OU (EE)
9. G R WRIGHT AND SONS LTD (UK)
10. SEKAB E-TECHNOLOGY (SE)
11. AGRIFIRM GROUP BV (NL)

FP7-KBBE-2007-1

DISCO



Targeted DISCOvery of novel cellulases and hemicellulases and their reaction mechanisms for hydrolysis of lignocellulosic biomass

www.disco-project.eu/



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-4 Biorefinery

FORESTSPECS



Upgrading of wood, wood-related residues and humic-origin substances to value-added chemicals and materials: from biological understanding to innovative applications – SICA (Russia)

The production of fine and industrial chemicals and bioactive compounds based on renewable, naturally occurring raw materials has become an exciting research topic, but so far only few studies concern side products of the forest industry. We will focus on bark and on peat. Bark is a high-volume waste product, currently largely unutilised as a raw material. Northern Europe and Russia have abundant peat reserves, offering a rich source of complex molecules for many application areas. White birch, pine and spruce form the basis for a very large wood industry. Betulin and suberin are the major components of the bark of birch trees. Betulin is a precursor of triterpenoid compounds having important pharmacological, physiological or biological properties useful in pharmaceutical and industrial applications. Interesting possibilities for betulin exist also in cosmetics and in agricultural applications. Suberin is the other main component of birch outer bark, and it can be used to produce new industrially potential products such as binders for coatings and composite materials, biodegradable lubricants, and surface-active agents. Bark from other tree species (Pinus, Picea, Populus, Larix), their properties, and possible uses will also be researched in this project, along with humic substances from peat. Our work includes innovative natural products chemistry, extraction and process technology; as well as basic research on mode of action and structure-function relationships within the application areas (e.g., in plant protection products: insect pest antifeedants, antifungal and antibacterial products; in pharmaceutical/medical applications, cosmetics, and bioremediation). We plan to ensure that promising results from this project will have a higher than the average probability of becoming products of significant importance to the forest, farming, medical and pharmaceutical sectors, with major positive spin-off impacts to human health and the environment.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,888,759.00

PROJECT N°

227239

DURATION

42 months

PROJECT START DATE

May 2009

LIST OF PARTNERS

1. HELSINGIN YLIOPISTO (FI)
2. VALTION TEKNILLINEN TUTKIMUSKESKUS (FI)
3. SAINT PETERSBURG STATE MEDICAL ACADEMY NAMED AFTER II. MECHNIKOV (RU)
4. UNIVERSITY OF SURREY (UK), SANKT-PETERSBURG RESEARCH INSTITUTE OF FORESTRY (RU)
5. FGU FAR EAST FORESTRY RESEARCH INSTITUTE (RU)
6. FORSCHUNGSINSTITUT FÜR BIOLOGISCHENLANDBAU STIFTUNG (CH)
7. TRIFOLIO-M GMBH (DE)
8. OY GRANULA AB, LTD (FI)

FP7-KBBE-2008-2B

FORESTSPECS

Wood Bark and Peat Based Bioactive Compounds,
Speciality Chemicals, and Remediation Materials:
from Innovations to Applications

<http://forestspecs.eu>


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-4 Biorefinery

GLOBAL-BIO-PACT



Biomass and bioproducts: sustainability certification and socioeconomic implications – Mandatory ICPC (Latin America and/or African ACP and/or Asia)

The objective of the Global-Bio-Pact project is the development and harmonisation of global sustainability certification systems for biomass production, conversion systems and trade in order to prevent negative socio-economic impacts.

A functioning and sustainable certification scheme requires reliable data and profound research in order to evaluate impacts of biomass production. Currently, the sustainability debate is faced by the lack of data on socio-economic impacts. Furthermore, mainly impacts of biofuels are investigated and impacts of bioproducts are neglected.

Thus, a harmonised certification scheme for biofuels and bioproducts is required.

In order to harmonise sustainability certification globally, the Global-Bio-Pact proposal includes partners from Europe, Latin America, Africa, Asia and USA.

Emphasis of the Global-Bio-Pact proposal will be placed on a detailed assessment of the socio-economic impacts of raw material production and a variety of biomass conversion chains. The impact of biomass production on global and local food security and the links between environmental and socio-economic impacts will be analysed. The Global-Bio-Pact project will investigate the interrelationship of global sustainability certification systems with international trade of biomass and bioproducts. Furthermore, Global-Bio-Pact will assess public perception of biomass production for industrial uses.

This will be completed by the development and test audit of a set of socio-economic sustainability criteria and indicators for inclusion into a future effective certification scheme. Thereby, opportunities and limitations of social issues in biomass/bioproducts certification schemes will be investigated. Finally, the project will elaborate recommendations on how to best integrate socio-economic sustainability criteria in European legislation and policies on biomass and bioproducts. Results of the Global-Bio-Pact project will contribute to the EU energy policy and to the MDG.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,494.00

PROJECT N°

245085

DURATION

36 months

PROJECT START DATE

February 2010

LIST OF PARTNERS

1. WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG (DE)
2. IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE (UK)
3. UNIVERSITEIT UTRECHT (NL)
4. B.T.G. BIOMASS TECHNOLOGY GROUP BV (NL)
5. IFEU, INSTITUT FUER ENERGIE- UND UMWELTFORSCHUNG HEIDELBERG GMBH (DE)
6. PROFORST LTD (UK)
7. ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE (CH)
8. UNIVERSIDADE ESTADUAL DE CAMPINAS (BR)
9. INSTITUTO NACIONAL DE TECNOLOGIA AGROPECUARIA (AR)
10. CENTRO AGRONOMOICO TROPICAL DE INVESTIGACION Y ENSEANZA CATIE (CR)
11. TANZANIA TRADITIONAL ENERGY DEVELOPMENT ORGANISATION (TZ)
12. MALI-FOLKECENTER NYETAA (ML)
13. PT GREENLIGHT BIOFUELS INDONESIA (ID)

FP7-KBBE-2009-3

GLOBAL-BIO-PACT

Global Assessment of Biomass and Bioproduct Impacts on Socio-economics and Sustainability

www.globalbiopact.eu



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-4 Biorefinery

LIGNODECO



Biomass pre-treatment for optimised biomass deconstruction and analytical characterisation – SICA (Brazil)

Biomass production costs are low in Brazil compared to other parts of the world, due to proper climate and advanced forest and agricultural technologies. The productivities of elephant grass (*Pennisetum* spp; 30–45 t/ha/yr bone dry) and eucalypt crops (20–30 t/ha/yr bone dry) in Brazil are amongst the world largest, with good perspectives of growing even further. Thus, Brazil presents great potential for application of the Biorefinery concept. It is our contend that production of biofuels and bio-products from lignocellulosics is better fit to existing pulp manufacturing facilities, to take advantage of existing infrastructure and the possibility of process integration. The objective of the LIGNODECO proposal is developing pre-treatments for optimized deconstruction of hybrid eucalyptus clones and elephant grass biomass into its components aimed at production of biofuel (bioethanol and biogas) along with specialty grade pulps and other bio-products, strongly emphasising feedstock selection and use of advanced analytical tools. This will be accomplished by collection/selection of feedstocks for deconstruction studies, optimized pre-treatments for woody and nonwoody materials, physical/chemical characterization of the pre-treated materials, and tie in between pre-treatment and industrial use of lignocellulosics. LIGNODECO incorporates innovations such as tailor-made modifications of existing technologies for paper-pulp industry, mild biotechnological pre-treatments based on biocatalysts, modern analytical techniques for characterizing lignin, hemicelluloses and cellulose, utilization of Brazilian fast-growing woody and nonwoody crops as feedstock for future biofuels, novel high value-added cellulosic pulps from eucalypt and grasses for specialty papers, integrated use of xylan and lignin-containing by-products and effluents in energy and biogas production, and production of hemicellulose-based additives for wood pulps, and lignin-based chemicals and power/steam.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,988,219.00

PROJECT N°

244362

DURATION

36 months

PROJECT START DATE

January 2010

LIST OF PARTNERS

1. UNIVERSIDADE FEDERAL DE VIÇOSA (BR)
2. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
3. VALTION TEKNILLINEN TUTKIMUSKESKUS (FI)
4. NOVOZYMES A/S (DK)
5. SUZANO PAPEL E CELULOSE S.A (BR)
6. CENTRE TECHNIQUE DE L'INDUSTRIE DES PAPIERS, CARTONS ET CELLULOSES (FR)

FP7-KBBE-2009-3

LIGNODECO



Optimized pre-treatment of fast growing woody and nonwoody Brazilian crops by detailed characterization of chemical changes produced in the lignin-carbohydrate matrix

www.lignodeco.com.br



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-4 Biorefinery

NEMO



Bioethanol and beyond - Novel enzymes and microorganisms for biomass conversion to bioethanol

The NEMO project provides novel efficient enzymes and microbes for 2nd generation bioethanol production. It generates through metabolic engineering and mutagenesis & screening approaches robust yeast strains that have a broad substrate range and can (co-)ferment C6 and C5 sugars to ethanol with high productivity (rate and yield), and that are significantly more stress tolerant, i.e. inhibitor, ethanol and thermotolerant than the current *S.cerevisiae* strains used in ethanol production. The NEMO project also identifies and improves enzymes for hydrolysis of biomasses relevant for Europe. Novel enzymes are identified and improved through various approaches, based on screening, broad comparative genomics analyses, and protein engineering. These efforts will generate more thermostable enzymes for high temperature hydrolysis, more efficient enzymes for hydrolysis of the resistant structures in lignocellulose such as crystalline cellulose and lignin-hemicellulose complexes, enzymes with reduced affinity on lignin, and efficient thermo and mesophilic enzyme mixtures that are optimised and tailor-made for the relevant biomasses for Europe and European industry. These novel biocatalysts are tested in an iterative manner in process relevant conditions, including also pilot-scale operations, which ensure that the novel enzymes and microbes will be superior in real process conditions. Furthermore, optimal enzyme, microbe and process regime combinations are identified, providing basis for the development of the most economic and ecoefficient overall processes. The impact of the NEMO project on 2nd generation bioethanol production is significant because it provides most realistic but widely applicable technologies that could be exploited broadly by European industry. Its impact goes also much beyond bioethanol because NEMO provides technology improvements that are directly applicable and crucial for efficient and economic production of also other biofuels and bulk chemicals.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,898,000.00

PROJECT N°

222699-2

DURATION

48 months

PROJECT START DATE

May 2009

LIST OF PARTNERS

1. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
2. LUNDS UNIVERSITET (SE)
3. HELSINGIN YLIOPISTO (FI)
4. UNIVERSITEIT UTRECHT (NL)
5. VIB (BE)
6. CHALMERS TEKNISKA HOEGSKOLA AB (SE)
7. JOHANN WOLFGANG GOETHE UNIVERSITAET FRANKFURT AM MAIN (DE)
8. ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE (CH)
9. UNIVERSITE DE LA MEDITERRANEE D'AIX-MARSEILLE II (FR)
10. UNIVERSITA' DEGLI STUDI DI MILANO-BICOCCA (IT)
11. KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN. KNAW (NL)
12. UNIVERZA V LJUBLJANI (SI)
13. CHEMTEX ITALIA SRL (IT)
14. DYADIC NEDERLAND BV (NL)
15. GREEN SUGAR GMBH PRODUKTINNOVATIONEN AUS BIOMASSE (DE)
16. SEKAB E-TECHNOLOGY AB (SE)
17. ROAL OY (FI)
18. C-LECTA GMBH (DE)
19. SYNGENTA CROP PROTECTION AG (CH)
20. WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG (DE)

FP7-KBBE-2007-2A

NEMO



Novel high-performance enzymes and microorganisms for conversion of lignocellulosic biomass to bioethanol

<http://nemo.vtt.fi>



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-4 Biorefinery

PROSPARE



Animal by-products - Novel methods of treatment of animal by-products for the production of substances with biologically valuable functional properties

The animal by-products (AB-P) industry has always been a vital part of the world food production chain, providing valuable new products and reducing pollution loads. Anyway, the treatment of animal bioresources requires new and safe biotechnological tools and processes are developed.

PROSPARE aims at developing a technological platform for multi-purpose processing of AB-P, in particular poultry ones, flexible enough to be tailored to different industrial sector needs. Using a novel biocatalytic approach unmarketable poultry secondary resources will be converted into value added peptide hydrolysates leading to marketable end-products, with programmable nutritional properties, and biodiesel. Innovative techniques will be used for the molecular characterization of the hydrolyzates. Safety issues associated with new technologies will be properly addressed and novel methods to assess the healthiness of intermediate and end-products developed and compared to standard ones. Platform feasibility will be demonstrated by scaling up to pre-industrial pilot level. The technological innovations will allow to obtain a range of products with programmed functional properties and sensory characteristics that will appeal to consumer objective and subjective requests. Functional characteristics to be targeted will include antioxidant, prebiotic, antimicrobial, antihypertensive properties.

The outcome of the PROSPARE project is likely to generate a significant technological breakthrough in the field of AB-P treatment. This will therefore have an impact on the current Regulatory Framework both in EU and RF. An important aim of the project is to prepare the ground for the evolution of the Commission directives in that context. Moreover, taking advantage of this international cooperation, recommendations on how to harmonise, in the longer term, both legislations will also be delivered to the Commission.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,670,555.00

PROJECT N°

212696

DURATION

36 months

PROJECT START DATE

September 2008

LIST OF PARTNERS

1. UNIVERSITA DEGLI STUDI DI PARMA (IT)
2. A.N. BAKH INSTITUTE OF BIOCHEMISTRY OF THE RUSSIAN ACADEMY OF SCIENCES (RU)
3. SYMBOL LTD (RU)
4. STATE INSTITUTION ALL-RUSSIAN RESEARCH INSTITUTE FOR POULTRY PROCESSING INDUSTRY OF RUSSIAN ACADEMY OF AGRICULTURAL SCIENCES GU VNIIPP (RU)
5. MOBITEK-M (RU)
6. VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. (BE)
7. CORE BIOTECH SA (BE)
8. AGRICOLA TRE VALLI SOCIETA COOPERATIVA (IT)

FP7-KBBE-2007-1

PROgress in Saving Proteins And Recovering Energy

PROSPARE

www.prospare.eu


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-4 Biorefinery

SPLASH



Biotechnology for novel biopolymers

The 4-year SPLASH project will develop a new biobased industrial platform using microalgae as a renewable raw material for the sustainable production and recovery of hydrocarbons and (exo)polysaccharides from the species *Botryococcus braunii* and further conversion to renewable polymers. The project comprises 20 partners of which 40% SME and several large corporates plus universities and research institutes.

Two bioproduction platforms will be explored: (1) green alga *Botryococcus braunii* on its own and (2) the green microalga *Chlamydomonas reinhardtii*, to which the unique hydrocarbon and polysaccharides producing genes from *Botryococcus* will be transferred. SPLASH will deliver knowledge, tools and technologies needed for the establishment of a new industry sector: Industrial Biotechnology with algae and/or algal genes for the manufacture of polyesters and polyolefins. The building blocks for these polymers will be derived from the sugars (polyesters) and hydrocarbons (polyolefins) exuded by the algae: adipic acid from galactose, 2,5-furandicarboxylic acid from glucose, rhamnose and fucose, 1,4-pentanediol from rhamnose and fucose, ethylene from 'green naphtha', propylene from 'green naphtha'.

The conversion of ethylene and propylene to polyolefins is common technology, and will not be included in the project. The sugar-derived building blocks will be converted to new condensation polymers, including poly(ethylene 2,5-furandioate) (PEF) and poly(1,4-pentylene adipate-co-2,5-furandioate). End-use applications include food packaging materials and fibres for yarns, ropes and nets. The project encompasses (1) development of *Botryococcus* as an industrial production platform, (2) Systems biology analysis, (3) Development of procedures for production, in situ extraction and isolation, (4) product development.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

8,942,932.00

PROJECT N°

311956

DURATION

48 months

PROJECT START DATE

September 2012

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. CENTRE FOR RESEARCH AND TECHNOLOGY HELLAS (EL)
3. ORGANIC WASTE SYSTEMS NV (BE)
4. PAQUES BV (NL)
5. NIELS-HENRIK NORSKER (DK)
6. VALUE FOR TECHNOLOGY BVBA (BE)
7. AVANTIUM CHEMICALS BV (NL)
8. LIFEGLIMMER GMBH (DE)
9. PURSUIT DYNAMICS PLC (UK)
10. NOVA-INSTITUT FÜR POLITISCHE UND ÖKOLOGISCHE INNOVATION GMBH (DE)
11. FRAUNHOFER-GESELLSCHAFT ZUR FÖRDERUNG DER ANGEWANDTEN FORSCHUNG E.V. (DE)
12. THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE (UK)
13. PNO CONSULTANTS BV (NL)
14. UNIVERSIDAD DE HUELVA (ES)
15. WAGENINGEN UNIVERSITEIT (NL)
16. UNIVERSITAET BIELEFELD (DE)
17. WESTFAELISCHE WILHELMS-UNIVERSITAET MUENSTER (DE)
18. EGE UNIVERSITESI (TR)
19. LANKHORST EURONETE PORTUGAL SA (PT)
20. RHODIA OPERATIONS (FR)

FP7-KBBE-2012-6-singlestage

SPLASH

Sustainable PoLymers from Algae
Sugars and Hydrocarbons

Website not available yet



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-4 Biorefinery

SYNPOL



Biotechnology for novel biopolymers

SYNPOL aims to propel the sustainable production of new biopolymers from feedstock. SYNPOL will thereto establish a platform that integrates biopolymer production through modern processing technologies, with bacterial fermentation of syngas, and the pyrolysis of highly complex biowaste (e.g., municipal, commercial, sludge, agricultural). The R&D activities will focus on the integration of innovative physico-chemical, biochemical, downstream and synthetic technologies to produce a wide range of new biopolymers. The integration will engage novel and mutually synergistic production methods as well as the assessment of the environmental benefits and drawbacks. This integrative platform will be revolutionary in its implementation of novel microwave pyrolytic treatments together with systems-biology defined highly efficient and physiologically balanced recombinant bacteria. The latter will produce biopolymer building-blocks and polyhydroxyalkanoates that will serve to synthesize novel bio-based plastic prototypes by chemical and enzymatic catalysis. Thus, the SYNPOL platform will empower the treatment and recycling of complex biological and chemical wastes and raw materials in a single integrated process. The knowledge generated through this innovative biotechnological approach will not only benefit the environmental management of terrestrial wastes, but also reduce the harmful environmental impact of petrochemical plastics. This project offers a timely strategic action that will enable the EU to lead worldwide the syngas fermentation technology for waste revalorisation and sustainable biopolymer production.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

7,344,554.00

PROJECT N°

311815

DURATION

48 months

PROJECT START DATE

October 2012

LIST OF PARTNERS

1. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
2. THE UNIVERSITY OF MANCHESTER (UK)
3. UNIVERSITAET ULM (DE)
4. UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN (IE)
5. HAUTE ECOLE SPECIALISEE DE SUISSE OCCIDENTALE (CH)
6. KUNGLIGA TEKNISKA HOEGSKOLAN (SE)
7. WESTFAELISCHE WILHELMS-UNIVERSITAET MÜNSTER (DE)
8. UNIVERSITE DE STRASBOURG (FR)
9. BIOPOLIS SL (ES)
10. BIOPLASTECH LTD (IE)
11. ORGANIC WASTE SYSTEMS NV (BE)
12. BIONET SERVICIOS TECNICOS SL (ES)
13. INFORS AG (CH)
14. BEFESA GESTION DE RESIDUOS INDUSTRIALES (ES)

FP7-KBBE-2012-6-singlestage

Biopolymers from syngas fermentation

SYNPOL

Website not available yet



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-4 Biorefinery

TRANSBIO



BioWASTE - Novel biotechnological approaches for transforming industrial and/or municipal biowaste into bioproducts – SICA

The main aim of TRANSBIO is the implementation of an innovative cascading concept for the valorisation of sub-products from fruit and vegetable processing industry using environmental friendly biotechnological solutions like fermentation and enzyme-conversion strategies to obtain valuable bioproducts like plastics (PHB), nutraceuticals / platform chemical succinic acid and enzymes for detergent applications. TRANSBIO will characterize and select appropriate by-products from fruit and vegetable processing industry, followed by adapted pre-treatment and enzymatic hydrolysis procedures to obtain fermentable sugars for microbial fermentation. In order to obtain a broad application potential for the by-products selected, the project will investigate three different fermentation strategies – submerged cultivation (SmF) in liquid media (bacteria, yeasts) and solid state fermentation (SSF) (fungi). Beside optimisation and up-scaling of fermentation Protocols, down-stream processing will be developed keeping in mind economical feasibility, sustainability as well as end-product formation (intracellular, extra cellular). The procedures will be optimised for extra cellular succinic acid production in SmF using novel non-conventional yeast strains and extracellular enzyme formation in SSF under utilisation of fungi as well as intracellular PHB formation in SmF with bacteria. The obtained PHB will be tested for their packaging application, enzymes will be proved for detergent utilisation and succinic acid will be purified for food application. Beside, original and pre-treated by-products as well as remaining biomass from fermentation strategies will be tested for their potential to be used as feedstock for biogas production via anaerobic digestion.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,989,465.00

PROJECT N°

289603

DURATION

48 months

PROJECT START DATE

December 2011

LIST OF PARTNERS

1. FUNDACION TECNALIA RESEARCH & INNOVATION (ES)
2. WETLANDS INCUBATOR SPRL (BE)
3. VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. (DE)
4. PROMIC SA (ES)
5. BIOESPLORA SRL (IT)
6. CENTRO NACIONAL DE TECNOLOGÍA Y SEGURIDAD ALIMENTARIA (CNTA). LABORATORIO DEL EBRO (ES)
7. UNIVERSITY OF COSTA RICA (CR)
8. SOLUCIONES VERDES SRL (AR)
9. UNIVERSIDADE DO MINHO (PT)
10. BIOTREND. INOVACAO E ENGENHARIA EM BIOTECNOLOGIA SA (PT)
11. BIOZOON GMBH (DE)
12. UNIVERSIDAD AUTONOMA METROPOLITANA (MX)
13. NATURSTOFF-TECHNIK GMBH (DE)
14. PROTEOS BIOTECH S.L.U. (ES)
15. TRITECC SRL (RO)
16. ORGANIC WASTE SYSTEMS NV (BE)

FP7-KBBE-2011-5

TRANSBIO

BioTRANSformation of by-products from fruit and vegetable processing industry into valuable BIOproducts

www.transbio.eu


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-5 Environmental biotechnology

AMIGA



GM crops in the EU – systematically assessing environmental and economic impacts

The project aims at a) providing baseline data on biodiversity in agro-ecosystems in the EU, b) translating regional protection goals in measurable assessment endpoints, c) defining lists of suitable bioindicators for various European regions, d) improving knowledge on potential long term environmental effects of genetically modified plants (GMPs), e) testing the efficacy of the EFSA Guidance Document (GD) for the Environmental Risk Assessment (ERA) of GMPs, f) exploring new strategies for post market monitoring, g) estimating the compatibility of GMPs with the Integrated Pest Management (IPM) principles implemented in the EU, h) providing a systematic analysis of economical aspects of GMPs cultivation in the EU, and i) setting a training and communication plan addressing public concerns about GMPs.

The consortium includes 22 partners (Research institutes, Universities, State Agencies and SMEs) located in 15 EU countries and. An ICPC country (Argentina) will contribute in validating the monitoring methodology in areas where GM crops are cultivated on larger scales.

A cornerstone is the application of the EFSA ERA GD, which is the basis for the update of the regulatory process of GMPs in the EU. The GD has provided ecologically sound principles for ERA, triggering the need of practically testing them. Partners of the consortium participated to the preparation of GD and 3 of them are senior authors of relevant chapters. The scientific activities will consist of case studies of maize and potato, the two GM crops currently approved for cultivation in the EU, and surveys in non-GM agro-ecosystems. The final outcome will include a network of EU representative sites for pre-market risk assessment and long-term monitoring studies, a set of standardised testing methods and a geographical information system integrating relevant datasets, protocols and tools to help EU decision-makers.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,997,963.00

PROJECT N°

289706

DURATION

48 months

PROJECT START DATE

December 2011

LIST OF PARTNERS

1. AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE, L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE (IT)
2. AARHUS UNIVERSITET (DK)
3. AGROBIOINSTITUTE (BG)
4. UMWELTBUNDESAMT GMBH (AT)
5. GEOSYS SA (FR)
6. HELSINGIN YLIOPISTO (FI)
7. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
8. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
9. MINERVA CONSULTING & COMMUNICATION (BE)
10. THE UNIVERSITY OF READING (UK)
11. INSTITUTUL NATIONAL DE CERTETARE DEZVOLTARE PENTRU STIINTE BIOLOGICE RA (RO)
12. THE JAMES HUTTON INSTITUTE LBG (UK)
13. TEAGASC. AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY (IE)
14. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
15. JOHANN HEINRICH VON THUENEN-INSTITUT, BUNDESFORSCHUNGSINSTITUT FUER LANDLICHE RAUME, WALD UND FISCHEREI (DE)
16. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
17. WAGENINGEN UNIVERSITEIT (NL)
18. JULIUS-MAXIMILIANS UNIVERSITAET WUERZBURG (DE)
19. SLOVENSKA POLNOHOSPODARSKA UNIVERSITA V NITRE (SLOVAK AGRICULTURAL UNIVERSITY IN NITRA) (SK)
20. LUNDS UNIVERSITET (SE)
21. INSTITUTO NACIONAL DE TECNOLOGIA AGROPECUARIA (AR)
22. ANDREAS LANG (DE)

FP7-KBBE-2011-5

AMIGA

Assessing and Monitoring the Impacts of Genetically modified plants on Agro-ecosystems

www.amigaproject.eu


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-5 Environmental biotechnology

ANIMPOL



Innovative biotechnology approaches as eco-efficient alternative to industrial processes

The project aims to develop of sound industrial processes that unite urgently needed solutions of industrial waste utilisation with the creation of essential alternative strategies for polymer industries still relying on fossil resources.

This will be done by the biotechnological conversion of waste streams from slaughterhouses, rendering and biodiesel industry towards biodegradable polymeric materials. Slaughterhouse waste is converted towards fatty acid esters (FAMES, biodiesel). Subsequently those FAME fractions that negatively influence the biodiesel properties as a fuel are biotechnologically converted towards high-value polyhydroxyalkanoate (PHA) biopolymers. This brings together representatives of the envisaged lead users: waste producers from animal processing industry and bio-fuel industry with the polymer industry looking for alternatives technologies.

Providing long-term strategies for long-term problems, the project will result in value creation for all players and provide innovative biotechnological approaches for absolutely needed eco-efficient alternatives to contemporary industrial polymer production.

The development of this integrated process will be accomplished by beyond the state-of-the-art inputs of microbiology, genetics, biotechnology, chemical engineering, polymer chemistry- and processing and life cycle analysis, combined with feasibility studies for marketing of the final products. The compiled Consortium absolutely conforms to the requirements to fulfill the envisaged project aims. Research is being carried out in close cooperation between academic and industrial partners. The project activities aim at solving local waste problems affecting the entire EU; the solutions will be developed on local scales, but are meant to be applied across the entire EU by suggesting cost-efficient and sound alternatives for current fossil-based processes and products of the polymer industry.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,895,660.00

PROJECT N°

245084

DURATION

36 months

PROJECT START DATE

January 2010

LIST OF PARTNERS

1. TECHNISCHE UNIVERSITAET GRAZ (AT)
2. UNIVERSITA DEGLI STUDI DI PADOVA (IT)
3. UNIVERSITY OF ZAGREB - FACULTY OF FOOD TECHNOLOGY AND BIOTECHNOLOGY (HR)
4. UNIVERSITAET GRAZ (AT)
5. ARGENT ENERGY (UK) LIMITED (UK)
6. TERMOPLAST (IT)
7. UNIVERSITA DI PISA (IT)
8. CENTRUM MATERIALOW POLIMEROWYCH I WEGLOWYCH POLSKA AKADEMIA NAUK*CMPIW PAN (PL)
9. KEMJSKI INSTITUT (SI)
10. ARGUS UMWELTBIOTECHNOLOGIE GMBH (DE)
11. ULRIKE REISTENHOFER GMBH (AT)

FP7-KBBE-2009-3

ANIMPOL

Biotechnological conversion of carbon containing wastes for eco-efficient production of high added value products

www.animpol.tugraz.at



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-5 Environmental biotechnology

BACSIN



Improved microbes for the environment - Microbial gene expression under condition of stress

BACSIN is a 16-member consortium with the main focus to improve rational exploitation of the catalytic properties of bacteria for the treatment and prevention of environmental pollution. Current application of bacteria in the environment is hindered by the lack of knowledge on the effects of stresses on cellular activity, most importantly abiotic stresses prevailing on site (e.g., desiccation or nutrient starvation), stresses as a result of pollution itself (e.g., toxicity), and those during strain preparation and formulation. BACSIN proposes four iterative poles of research and technology to overcome this hindrance for subsequent improved microbial usage. The 1st pole will investigate genome-wide catabolic and stress expression in a set of different pollutant degrading bacteria (the 'BACSINS'). Key cellular factors and regulatory networks determining the interplay between stress-survival and pollutant catabolism will be unveiled, and faithful predictive models for cell behaviour produced. The 2nd pole will study stress resistance, survival and activity of BACSINS in real polluted environments, via microcosms and in situ 'traps', plant roots and leaves, while accentuating possible effects on native communities. The 3^d pole will focus on the original microbial communities at contaminated sites, to discover and exploit more optimal stress and survival resistance among resident pollutant-degrading bacteria. We will develop molecular diagnostics tools to screen contaminated sites for catabolic and stress parameters, and decide whether BACSIN complementation should be considered. Promising isolates of resident bacteria will be studied as new BACSINS, to show the usefulness of the 'diagnosis-isolation-reintroduction' approach for enhancing pollutant biodegradation rates. Finally, we will focus on BACSIN formulations, to understand the stresses on bacteria during growth, preservation and resuscitation, and to produce optimally active cells for environmental application.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,530,090.00

PROJECT N°

211684

DURATION

48 months

PROJECT START DATE

June 2008

LIST OF PARTNERS

1. UNIVERSITE DE LAUSANNE (CH)
2. BIO-ILIBERIS RESEARCH AND DEVELOPMENT (ES)
3. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
4. EARTH TECH CZ SRO (CZ)
5. GOETEBORGS UNIVERSITET (SE)
6. HELMHOLTZ-ZENTRUM FUER INFektionsFORSCHUNG GMBH (DE)
7. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
8. KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN. KNAW (NL)
9. SVERIGES LANTBRUKSUNIVERSITET (SE)
10. TECHNISCHE UNIVERSITÄT CAROLO-WILHELMINA ZU BRAUNSCHWEIG (DE)
11. HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH. UFZ (DE)
12. VERENIGING VOOR CHRISTELIJK HOGER ONDERWIJS WETENSCHAPPELIJK ONDERZOEK EN PATIENTENZORG (NL)
13. WAGENINGEN UNIVERSITEIT (NL)
14. COMMISSION OF THE EUROPEAN COMMUNITIES. DIRECTORATE GENERAL JOINT RESEARCH CENTRE. JRC (BE)
15. BELAIR BIOTECH LTD (CH)
16. ECOENGINEERING (HR)

FP7-KBBE-2007-1

BACSIN



Bacterial Abiotic Cellular Stress and Survival Improvement Network

www.unil.ch/bacsin


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-5 Environmental biotechnology

BIOCLEAN



Biotechnological solutions for the degradation of synthetic polymeric materials (The Ocean of Tomorrow)

In BIOCLEAN project, novel and robust microorganisms (aerobic and anaerobic bacteria, and fungi) able to extensively degrade polyethylene (PE), polypropylene (PP), polystyrol (PS) and polyvinyl chloride (PVC) polymers and plastics will be isolated from actual-site aged plastic wastes obtained from several European marine and terrestrial sites, composting facilities and landfills, and obtained via tailored screenings from existing European collections of microbes. Robust enzymes able to fragment the target plastics with the production of valuable chemicals and building blocks will be obtained from the selected microbes and enzyme collections. Untreated and physically/chemically pre-treated PE, PS, PP and PVC polymers and plastics will be employed in such isolation/ screening activities, and an integrated methodology, relying on advanced analytical methods (determining plastics physicochemical changes and breakdown products resulting from biological attack), and tailored enzymatic, microbiological and ecotoxicological methods, will be adopted for the characterization of actual industrial relevance of the obtained microbes and enzymes. Physical and chemical pretreatments improving biodegradability of target plastics will be identified and transferred on the pilot scale. The most promising microbial cultures and enzymes will be exploited in the development of pilot scale, slurry or solid-phase bioprocesses for the bioremediation and controlled depolymerization, respectively, of target pretreated plastics and in the set up of tailored bioaugmentation protocols for enhancing plastic waste biodegradation in marine water systems, composting and anaerobic digester facilities. The processes developed will be assessed for their economical and environmental sustainability. Field scale validation of the most promising bioaugmentation protocols in a composting and a marine site and attempts to develop a plastic pollution reduction strategy for the Aegean Sea have been planned too.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,995,988.00

PROJECT N°

312100

DURATION

36 months

PROJECT START DATE

September 2012

LIST OF PARTNERS

1. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
2. FACHHOCHSCHULE NORDWESTSCHWEIZ (CH)
3. TECHNICAL UNIVERSITY OF CRETE (EL)
4. HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH. UFZ (DE)
5. MADEP SA (CH)
6. INTERNATIONALES HOCHSCHULINSTITUT ZITTAU (DE)
7. OSTRAVSKA UNIVERZITA V OSTRAVE (CZ)
8. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
9. CENTRUM MATERIALOWYCH POLIMEROWYCH I WEGLOWYCH POLSKA AKADEMIA NAUK CMPIW PAN (PL)
10. ORGANIC WASTE SYSTEMS NV (BE)
11. FELSILAB SRL (IT)
12. BIOBASIC ENVIRONNEMENT SARL (FR)
13. TECHNIKI PROSTASIAS PERIVALLONTOS ANONYMI ETAIREIA (EL)
14. NANJING UNIVERSITY (CN)
15. DIADIMOTIKI EPICHEIRISI DIACHEIRISIS STEREON APOVLITON ANONYMI ETAIREIA OTA (EL)
16. MARITIM MILJO BEREDSKAP AS (NO)
17. PLASTICSEUROPE (BE)
18. SIMA-TEC GMBH (DE)
19. HAVFORSKNINGSINSTITUTTET (NO)

FP7-KBBE-2012-6-singlestage

BIOCLEAN

New BIOTEchnologiCaL approaches for biodegrading and promoting the environmEntal biotrAnsformation of syNthetic polymeric materials

Website not available yet



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-5 Environmental biotechnology

BIOTREAT



Biotechnology for the environment - Soil and water treatment and bioremediation

BIOTREAT brings together six research institutions and four SMEs to develop much-needed water treatment biotechnologies for removing pesticides, pharmaceuticals and other organic micropollutants from contaminated drinking water resources. These biotechnologies will be developed into prototype biofilter systems ready for subsequent commercialisation. The biofilters will contain non-pathogenic pollutant-degrading bacteria, with the bacteria being immobilised on specific carriers to ensure their prolonged survival and sustained degradative activity. Through beyond state-of-the-art research, BIOTREAT will ensure that these novel water treatment biotechnologies are highly transparent, reliable and predictable. Two complementary biotreatment strategies will be followed, one based on metabolic processes whereby the bacteria completely mineralise specific micropollutants and the other based on cometabolic degradation utilising the ability of methane- and ammonium-oxidising bacteria to unspecifically degrade a range of micropollutants for which specific degraders are not yet available. The biofilter systems will be carefully validated through cost-benefit analysis and environmental life cycle assessment. A road map will be drawn up for post-project exploitation, including individual SME business plans. Effective dissemination of the BIOTREAT results will be ensured by close collaboration with an End-user Board comprised of representatives from waterworks, water authorities, industry, etc. In addition to bringing considerable advances to water treatment biotechnology, the main outcome of BIOTREAT will thus be prototype biofilter systems (metabolic and cometabolic) ready for commercialisation in a number of highly relevant water treatment scenarios, including existing sand filters at waterworks, mobile biofilters placed close to groundwater abstraction wells, sand barriers between surface waters and abstraction wells, and protective barriers in aquifers.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,520.00

PROJECT N°

266039

DURATION

48 months

PROJECT START DATE

January 2011

LIST OF PARTNERS

1. THE GEOLOGICAL SURVEY OF DENMARK AND GREENLAND (DK)
2. DANMARKS TEKNISKE UNIVERSITET (DK)
3. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
4. EIDGENOESSISCHE ANSTALT FÜR WASSERVERSORGUNG ABWASSERREINIGUNG UND GEWÄSSERSCHUTZ (CH)
5. UNIVERSITEIT GENT (BE)
6. BUNDESANSTALT FÜR GEWÄSSERKUNDE (DE)
7. INSTITUT ZA FIZIKALNO BIOLOGIJO D.O.O. (SI)
8. BIOCLEAR BV (NL)
9. AVECOM N.V. (BE)
10. 2.-O LCA CONSULTANTS APS (DK)
11. VLAAMSE MAATSCHAPPIJ VOORWATERVOORZIENING CVBA (BE)

FP7-KBBE-2010-4

BIOTREAT



Biotreatment of drinking water resources polluted by pesticides, pharmaceuticals and other micropollutants

<http://biotreat-eu.org>





ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-5 Environmental biotechnology

GRACE

Verification of GMO risk assessment elements and review and communication of evidence collected on the biosafety of GMO

The project GRACE will

- elaborate and sustainably implement a transparent framework for the review of GMOs or GM food and feed effects on environment, socio-economics and health and
- reconsider the design, execution and interpretation of results of animal feeding trials as well as in vitro studies for assessing the safety of GM food and feed. The framework will create high quality reviewing processes for different fields of GMO impact assessment and address the need for a well documented, transparent and sustainable representation of these reviewing processes. This will provide valuable and accessible information addressing the main issues associated with GMOs and enabling risk assessors, managers, scientists and the general public to reiterate and update their evaluations and conclusions on GMOs. It will adapt recently elaborated methodologies for (systematic) reviewing of the risk assessment information of GMOs and derived food and feed. The quality assessment for all reviewed papers and studies as well as the reviews conducted by the consortium, will be referenced by an open access database and "one-stop-shop" for data and information relevant to GMO risk assessment.

Animal feeding trials and in vitro studies will clarify and compare the scientific added value of 90-day feeding trials with whole foods with advanced state-of-the-art analytical, in vitro and in-silico tools. Suitable animal GMO-feeding models will be investigated, that are based on European (EFSA) and international guidance, and the project will provide guidance for relevant, alternative in vitro cell-based approaches for specific topics within the overall food and feed safety assessment. Available standard or scientifically approved protocols form the basis of the investigations also in the case of the analytical, in-vitro and in-silico approaches. GRACE will provide guidance for the use and improvement of existing and suggested assessment tools in the field of food and feed safety.

FP7-KBBE-2012-6-singlestage

GRACE



GMO Risk Assessment and
Communication of Evidence

Website not available yet



PROJECT COORDINATOR

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BUNDESFORSCHUNGSINSTITUT FUR
KULTURPFLANZEN (DE)

FUNDING SCHEME

CP

EC CONTRIBUTION €

5,981,013.00

PROJECT N°

311957

DURATION

42 months

PROJECT START DATE

June 2012

LIST OF PARTNERS

- JULIUS KUHN-INSTITUT
BUNDESFORSCHUNGSINSTITUT FUR
KULTURPFLANZEN (DE)
- AGROBIOINSTITUTE (BG)
- AARHUS UNIVERSITET (DK)
- CENTRE FOR EUROPEAN POLICY STUDIES (BE)
- CENTRE DE RECERCA AGRIGENOMICA CONSORCI
CSIC-IRTA-UAB (CRAG) (ES)
- EIDGENOESSISCHES
VOLKSWIRTSCHAFTSDEPARTEMENT (CH)
- FREIE UNIVERSITAET BERLIN (DE)
- GENIUS GMBH. BIOTECHNOLOGIE BERATUNG
UND KOMMUNIKATION (DE)
- INTERNATIONAL CENTRE FOR GENETIC
ENGINEERING AND BIOTECHNOLOGY (IT)
- INTERDISZIPLINARES FORSCHUNGSZENTRUM
FUR TECHNIK, ARBEIT UND KULTUR (AT)
- INSTITUT NATIONAL DE LA RECHERCHE
AGRONOMIQUE (FR)
- PERSEUS BVBA (BE)
- STICHTING DIENST LANDBOUWKUNDIG
ONDERZOEK (NL)
- JEREMY BRUTON SWEET (UK)
- SLOVENSKA ZDRAVOTNICKA UNIVERZITA V
BRATISLAVE (SK)
- TECHNISCHE UNIVERSITAET MUENCHEN (DE)
- COUNCIL FOR SCIENTIFIC AND INDUSTRIAL
RESEARCH (ZA)
- UNITED STATES DEPARTMENT OF AGRICULTURE
(US)

ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-5 Environmental biotechnology

GREENLAND



Biotechnology for the environment - Soil and water treatment and bioremediation

Gentle remediation options (g.r.o.) include various (mostly plant based) approaches to remediate trace element contaminated soils at low cost and without significant negative effects for the environment. Although g.r.o. comprise very innovative and efficient technologies, they are still not widely used as practical site solution due to several reasons of hindrance for applying g.r.o. as practical solution.

Greenland is bringing gentle remediation options (phytoremediation, in situ stabilisation) into practical application for solving the final problems comprising still major reasons of hindrance. The major objectives are:

- test the remediation efficiency and success in pilot field case studies
- develop a toolkit to quantify the remediation progress and targets (no total, but "bioavailable" trace element fractions)
- test different technologies of biomass valorisation (incineration, gasification, biodiesel production, etc.)
- develop a decision support tool
- publish a best practice guide

Greenland has defined two groups of end users:

- 1) companies that will offer gentle remediation options commercially (including the treatment of metal-rich biomass) - these group is part of the project consortium
- 2) stakeholders (including environmental agencies) that will decide for gentle remediation options - these are not part of the project consortium but of the advisory board.

The main task of the advisory board is to take part in 4 Greenland project meetings (kick off, 2 midterm, final meeting) to give feedback on the project progress. The members of the advisory board should especially consider if their requirements are met (e.g. do we provide all the necessary needed information allowing future stakeholders to apply gentle remediation options in practice).

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,995,507.00

PROJECT N°

266124

DURATION

48 months

PROJECT START DATE

January 2011

LIST OF PARTNERS

1. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
2. UNIVERSITEIT HASSELT (BE)
3. LULEA TEKNISKA UNIVERSITET (SE)
4. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
5. INSTITUT NATIONAL DE L'ENVIRONNEMENT ET DES RISQUES INERIS (FR)
6. UNIVERSITY OF BRIGHTON (UK)
7. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
8. UNIVERSITA DEGLI STUDI DI FIRENZE (IT)
9. AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH (AT)
10. INSTYTUT UPRAWY NAWOZENIA I GLEBOZNAWSTWA, PANSTWOWY INSTYTUT BADAWCZY (PL)
11. PHYTOTECH FOUNDATION (CH)
12. SACHSISCHES LANDESAMT FUR UMWELT LANDWIRTSCHAFT UND GEOLOGIE (DE)
13. SVERIGES LANTBRUKSUNIVERSITET (SE)
14. TRATAMIENTOS ECOLOGICOS DEL NOROESTE S.L. (ES)
15. ATON-HT SPOLKA AKCYJNA (PL)
16. INNOVEOX SAS (FR)
17. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)

FP7-KBBE-2010-4

Gentle remediation of trace element contaminated land

GREENLAND

www.greenland-project.eu


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-5 Environmental biotechnology

HOTZYME



Microbial diversity and metagenomic mining for biotechnological innovation

There is a strong need for new thermostable hydrolases with appropriate performance and/or novel functionalities that could provide huge savings in time, money and energy for industrial processes. The HotZyme project aims to identify such enzymes from hot terrestrial environments, using metagenomic screening methods. New bioinformatic tools will be developed to facilitate function prediction of genes from metagenomes that show low or no sequence homology to enzymes of known function. A range of high-throughput screening technologies will be employed to identify novel hydrolases. The consortium is composed of 13 partners from 10 European countries plus one partner from USA. The strong expertise in Microbiology, Molecular Biology, Biochemistry, Biophysics, Geochemistry, Nanotechnology and Bioinformatics from our partners will be integrated in the project to ensure the fulfilment of the proposed tasks. Importantly, the four industrial partners, including two SMEs, will seek to commercialize the project results, thus ensuring a European wide impact, post project.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,518,544.00

PROJECT N°

265933

DURATION

48 months

PROJECT START DATE

April 2011

LIST OF PARTNERS

1. KØBENHAVNS UNIVERSITET (DK)
2. MICRODISH BV (NL)
3. MONTANA STATE UNIVERSITY BOZEMAN (US)
4. STIFTELSEN NORGES GEOTEKNISKE INSTITUTT (NO)
5. S.N. WINOGRADSKY INSTITUTE OF MICROBIOLOGY OF THE RUSSIAN ACADEMY OF SCIENCES (RU)
6. NOVOZYMES A/S (DK)
7. WAGENINGEN UNIVERSITEIT (NL)
8. THE UNIVERSITY OF EXETER (UK)
9. SIGMA-ALDRICH PRODUCTION GMBH (CH)
10. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
11. NATIONAL TECHNICAL UNIVERSITY OF ATHENS (EL)
12. UNIVERSITAET DUISBURG-ESSEN (DE)
13. EUROPEAN CENTRE FOR RESEARCH & FINANCING LTD (IL)

FP7-KBBE-2010-4

HOTZYME



Systematic screening for novel hydrolases from hot environments

<http://hotzyme.com/>



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-5 Environmental biotechnology

KILL●SPILL



Innovative biotechnologies for tackling oil spill disasters (The Ocean of Tomorrow)

Kill●Spill delivers innovative (bio)technologies, which can be integrated to the real sequences of state-of-the-art actions used currently to cleanup oil spills. The catalogue of Kill●Spill products & technologies is based on a review of technology & knowledge gaps in approaches of oil spill disasters and brings appropriate tools for 1st response, follow-up, and longer-term actions, specifically tailored to the versatility of oil spills. Kill●Spill develops chemicals & biochemicals to be used for 1st response actions to disperse/emulsify oil and materials enabling the containment and sorption of oil, preparing the field for the follow-up actions. Kill●Spill develops (Bio)technologies aiming at intensified biodegradation processes by bioaugmentation/biostimulation as follow-up and longer term actions in aerobic/slight anoxic compartments. Kill●Spill develops (bio) technologies adapted for the remediation of anoxic/anaerobic fresh & chronically polluted sediments. Kill●Spill compiles knowledge on dispersion/sorption and biodegradation processes to produce multifunctional products, which are suited for follow-up and longer term actions. The multifunctional products address the necessity for integrated bioremediation (bioavailability, metabolic requirements, etc.) and are efficient along the whole redox gradient from surface water to sediments. The products/technologies are field-tested in open sea oil spills and large mesocosms to unravel the champions products & technologies. The (bio)tools are benchmarked with existing solutions using cutting-edge analytics, biosensors, and omics and checked for eco-efficiency to merit green label. Kill●Spill consortium is multidisciplinary and gathers 38 partners from 11 EU and EU-associated countries and USA; 22 research & academic institutions, 14 SMEs, 1 large company, and 1 association of oil spill companies work together with the support of a high level advisory board to cover the whole chain of oil spill (bio) remediation.

PROJECT COORDINATOR

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FUNDING SCHEME CP**EC CONTRIBUTION** € 8,996,599.00**PROJECT N°** 312139**DURATION** 48 months**PROJECT START DATE**

January 2013

LIST OF PARTNERS

1. TECHNICAL UNIVERSITY OF CRETE (EL)
2. FACHHOCHSCHULE NORDWESTSCHWEIZ (CH)
3. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
4. UNIVERSITY OF NEWCASTLE UPON TYNE (UK)
5. THE GEOLOGICAL SURVEY OF DENMARK AND GREENLAND (DK)
6. UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA (IT)
7. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
8. UNIVERSITY OF ULSTER (UK)
9. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
10. UNIVERSITA DEGLI STUDI DI MILANO (IT)
11. UNIVERSITEIT GENT (BE)
12. VYSOKA SKOLA CHEMICKO-TECHNOLOGICKA V PRAZE (CZ)
13. KØBENHAVNS UNIVERSITET (DK)
14. BANGOR UNIVERSITY (UK)
15. HELMHOLTZ ZENTRUM MÜNCHEN DEUTSCHES FORSCHUNGSZENTRUM FUER GESUNDHEIT UND UMWELT GMBH (DE)
16. MARINE BIOLOGICAL ASSOCIATION OF THE UNITED KINGDOM (UK)
17. UNIVERSITE CATHOLIQUE DE LOUVAIN (BE)
18. NATIONAL UNIVERSITY OF IRELAND, GALWAY (IE)
19. BIOBASED EUROPE LIMITED (UK)
20. BIOREM ENGINEERING BVBA (BE)
21. GORTON CONSULTANCY LTD (UK)
22. CREATIVE RESEARCH SOLUTIONS BVBA (BE)
23. TECHNIKI PROSTASIAS PERIVALLONTOS ANONYMI ETAIREIA (EL)
24. MADEP SA (CH)
25. HEIQ MATERIALS AG (CH)
26. MARITIM MILJO BEREDSKAP AS (NO)
27. INSTITUT ZA FIZIKALNO BIOLOGIJO D.O.O. (SI)
28. ECOTECHSYSTEMS SRL (IT)
29. UK SPILL LIMITED (UK)
30. VERMICON AKTIENGESELLSCHAFT (DE)
31. ACTYGEA SRL (IT)
32. OMYA DEVELOPMENT AG (CH)
33. THE RESEARCH FOUNDATION OF STATE UNIVERSITY OF NEW YORK (US)

FP7-KBBE-2012-6-singlestage

KILL●SPILL

European
CommissionIntegrated Biotechnological Solutions for
Combating Marine Oil Spills<http://www.killspill.eu/>

ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-5 Environmental biotechnology

MAGICPAH



Molecular approaches to bioremediation of polyaromatic hydrocarbon compounds

MAGICPAH aims to explore, understand and exploit the catalytic activities of microbial communities involved in the degradation of persistent PAHs. It will integrate (meta-) genomic studies with in-situ activity assessment based on stable isotope probing particularly in complex matrices of different terrestrial and marine environments. PAH degradation under various conditions of bioavailability will be assessed as to improve rational exploitation of the catalytic properties of bacteria for the treatment and prevention of PAH pollution. We will generate a knowledge base not only on the microbial catabolome for biodegradation of PAHs in various impacted environmental settings based on genome gazing, retrieval and characterization of specific enzymes but also on systems related bioavailability of contaminant mixtures. MAGICPAH takes into account the tremendous undiscovered metagenomic resources by the direct retrieval from genome/metagenome libraries and consequent characterization of enzymes through activity screens. These screens will include a high-end functional small-molecule fluorescence screening platform and will allow us to directly access novel metabolic reactions followed by their rational exploitation for biocatalysis and the re-construction of biodegradation networks. Results from (meta-) genomic approaches will be correlated with microbial in situ activity assessments, specifically dedicated to identifying key players and key reactions involved in anaerobic PAH metabolism. Key processes for PAH metabolism particularly in marine and composting environments and the kinetics of aerobic degradation of PAH under different conditions of bioavailability will be assessed in model systems, the rational manipulation of which will allow us to deduce correlations between system performance and genomic blueprint. The results will be used to improve treatments of PAH-contaminated sites.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,997,137.00

PROJECT N°

245226

DURATION

48 months

PROJECT START DATE

April 2010

LIST OF PARTNERS

1. HELMHOLTZ-ZENTRUM FUER INFEKTIONSFORSCHUNG GMBH (DE)
2. CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
3. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
4. BANGOR UNIVERSITY (UK)
5. DANMARKS TEKNISKE UNIVERSITET (DK)
6. AECOM CZ SRO (CZ)
7. COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (FR)
8. HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH, UFZ (DE)
9. AARHUS UNIVERSITET (DK)
10. SYNDIAL SPA. ATTIVITA DIVERSIFICATE (IT)
11. CORPORACION CORPOGEN (CO)
12. THE GOVERNING COUNCIL OF THE UNIVERSITY OF TORONTO (CA)
13. UNIVERSITAET LEIPZIG (DE)

FP7-KBBE-2009-3

MAGICPAH



Molecular Approaches and MetaGenomic Investigations for optimizing Clean-up of PAH contaminated sites

www.magicpah.org



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-5 Environmental biotechnology

METAEXPLORE



Activity mining in metagenomes – Exploring molecular microbial diversity in aquatic environment or the soil

This proposal will (further) develop and apply metagenomics tools to access the enzymatic potential borne in the cryptic biota of selected natural habitats, in particular target soil-related and aquatic ones. In the light of the environmental relevance of chitins and lignins (as natural compounds recalcitrant to degradation) and halogenated aliphatic and aromatic compounds (anthropogenic recalcitrant compounds), the enzymatic activities that we will target are functions able to degrade these compounds. A database of gene functions will be established and maintained. Next to its great relevance to environmental biotechnology including bioremediation, a spin-off of the work will be the discovery of novel biocatalytic functions of industrial relevance. We will in particular address the catabolic potential that is encoded by the mobilome, the collective pool of mobile genetic elements in the microbiota. We will further apply high-throughput (454-based) sequencing to rapidly unravel the metabolic complement in this mobile gene pool. The project brings together a suite of 15 contractors across Europe, encompassing 21 laboratories spread over 11 countries and including 4 SMEs. Most of the partners are renowned laboratories which have vast experience in metagenomics of environmental samples, biotechnology, enzymology, bioinformatics, the mobilome, waste management and bioremediation and enzyme production.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,999,991.00

PROJECT N°

222625-2

DURATION

60 months

PROJECT START DATE

May 2009

LIST OF PARTNERS

1. RIJKSUNIVERSITEIT GRONINGEN (NL)
2. RIJKSUNIVERSITEIT GRONINGEN (NL)
3. KØBENHAVNS UNIVERSITET (DK)
4. SODERTORNS HOGSKOLA (SE)
5. THE UNIVERSITY OF WARWICK (UK)
6. WAGENINGEN UNIVERSITEIT (NL)
7. ECOLE CENTRALE DE LYON (FR)
8. UNIVERSITAET BIELEFELD (DE)
9. JULIUS KUHN INSTITUT
BUNDESFORSCHUNGSINSTITUT FUR
KULTURPFLANZEN (DE)
10. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
11. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
12. UNIVERSITE CATHOLIQUE DE LOUVAIN (BE)
13. UNIVERSITA DEGLI STUDI DELL'INUBRIA (IT)
14. UNIVERZA V LJUBLJANI (SI)
15. UNIVERSIDAD NACIONAL DE LA PLATA (AR)
16. BIODETECTION SYSTEMS B.V. (NL)
17. WHITBY SEAFOODS LTD (UK)
18. INSTITUT NATIONAL DE LA RECHERCHE
AGRONOMIQUE (FR)

FP7-KBBE-2007-2A

METAEXPLORE

Metagenomics for bioexploration -
Tools and applicationwww.rug.nl/metaexplore

ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-5 Environmental biotechnology

MINOTAURUS



Biotechnology for the environment - Soil and water treatment and bioremediation

MINOTAURUS will deliver innovative bio-processes (bioaugmentation, enzyme technology, rhizoremediation with halophytes, and bioelectrochemical remediation), which are all based on the concept of IMMOBILIZATION OF BIOCATALYSTS (microorganisms and enzymes), to eliminate emerging and classic organic pollutants. The immobilization-based technologies will be applied to engineered (ex-situ) and natural systems (in situ) for the bioremediation of groundwater, wastewater, and soil. The selection and adaptation of modern physico-chemical, biological, and ecotoxicological monitoring tools combined to a rational understanding of engineering and enzymology/microbial physiology aspects is a pertinent approach to open the black-box of the our technologies. The reliable process-monitoring will constitute a solid basis to develop and refine our biodegradation kinetics models, which will be the mean to improve the predictability of performances to be achieved with our technologies. A key strength of MINOTAURUS is the possibility of direct implementation of our technologies at five EU reference sites that are confronted with pollutants (two technologies will be tested on-site during the first year). We will deliver not only a set of tools, techniques and processes which will enhance the ability of our communities to respond to the challenges of organic pollutants but also frameworks for structuring and making evidence-based decisions for the most sustainable and appropriate bioremediation measures. MINOTAURUS consortium consists of fifteen partners from eight European and Europe-associated countries. Eight research & education institutions, five SMEs covering the whole chain of our bioremediation approaches (production/monitoring of biocatalysts, bioremediation, and engineering), one large end-user installing wastewater treatment plants, and one environmental agency will work together with the support of an advisory board mainly consisting of environmental decision-makers.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,999,110.00

PROJECT N°

265946

DURATION

36 months

PROJECT START DATE

January 2011

LIST OF PARTNERS

1. FACHHOCHSCHULE NORDWESTSCHWEIZ (CH)
2. HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH. UFZ (DE)
3. UNIVERSITE CATHOLIQUE DE LOUVAIN (BE)
4. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)
5. TECHNICAL UNIVERSITY OF CRETE (EL)
6. UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA (IT)
7. WETLANDS INCUBATOR SPRL (BE)
8. VYSOKA SKOLA CHEMICKO-TECHNOLOGICKA V PRAZE (CZ)
9. VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. (BE)
10. HEFER SYSTEMS & CONTROLS LTD. (IL)
11. UMWELTBUNDESAMT GMBH (AT)
12. VERMICON AKTIENGESSELLSCHAFT (DE)
13. MADEP SA (CH)
14. CREATIVE RESEARCH SOLUTIONS BVBA (BE)
15. AQUAFIN N.V. (BE)
16. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)

FP7-KBBE-2010-4

MINOTAURUS



Microorganism and enzyme Immobilization:
Novel Techniques and Approaches for Upgraded
Remediation of Underground-, wastewater and Soil

www.minotaurus-project.eu



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-5 Environmental biotechnology

TARPOL



Synthetic biology for the environment - The use of Synthetic Biology for the solution of environmental problems

Synthetic Biology-SB- deals with rational combination of biological properties with central elements of engineering design. By merging the genetic tool box already available with engineering disciplines & computer sciences there is a great opportunity for a new approach to environmental pollution problems through application of modelling techniques & organizing development of novel biological systems across a hierarchical architecture with defined & standardized interfaces. However this faces 3 major bottlenecks:

- The scientific & technical European contributors on SB have so far failed to recognise their latent capacity to shape a fresh discipline at their very interface
- SB still lacks a comprehensive language & shared conceptual frame for the description of minimally functional biological parts
- The development of SB touches on social sensitivities related to recreating life-in-the-test-tube which threatens to re-awaken the GMO controversy. Thus scaring off the necessary industrial input in the field

To tackle these challenges, we propose a 2-year program run by a large expert group to coordinate the fragmented efforts & direct this discipline into the most industrially beneficial and socially viable directions. We aim to energise and mobilise the European scientific, technical & social professionals to empower a new capacity to exploit properties present in Biological systems for environmental issues. TARPOL will recruit the required environmental competences from neighbouring disciplines and will set up a number of material and computational resources for advanced refactoring of biological systems. We will establish a frame consensus for procedure and parts standardization and pursue the awareness and eventual insertion of SB into the Environmental Biotechnology context by exploring its industrial interface. Finally, we will pursue the establishment of a solid European Research Agenda on SB-for-Environment at the service of implementing the KBBE vision.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

997,215.00

PROJECT N°

212894

DURATION

27 months

PROJECT START DATE

July 2008

LIST OF PARTNERS

1. UNIVERSITAT DE VALENCIA (ES)
2. HELMHOLTZ-ZENTRUM FUER INFektionsFORSCHUNG GMBH (DE)
3. CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
4. INSTITUT PASTEUR (FR)
5. UNIVERSIDAD POLITECNICA DE VALENCIA (ES)
6. UNIVERSITE DE LAUSANNE (CH)
7. UNIVERSITA DEGLI STUDI DI MILANO (IT)
8. GENEART AG (DE)
9. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS) (FR)
10. UNIVERSITA CA' FOSCARI DI VENEZIA (IT)
11. MAGYAR TUDOMANYOS AKADEMIA SZEGEDI BIOLOGIAI KOZPONTJA (HU)
12. FUNDACION CENTRO NACIONAL DE INVESTIGACIONES ONCOLOGICAS CARLOS III (ES)
13. COMMISSARIAT A L'ENERGIE ATOMIQUE (CEA) (FR)
14. ORGANISATION FOR INTERNATIONAL DIALOGUE AND CONFLICT MANAGEMENT (AT)
15. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS) (FR)
16. EIDGENÖSSISCHE TECHNISCHE HOCHSCHULE ZÜRICH (CH)
17. IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE (UK)
18. BAUER UMWELT GMBH (DE)

FP7-KBBE-2007-1

TARPOL

Targeting environmental pollution with engineered microbial systems à la carte

no dedicated website





ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-5 Environmental biotechnology

ULIXES

Approaches towards bioremediation of the Mediterranean Sea by exploring its microbial diversity – SICA (Mediterranean Partner Countries)

The project Ulixes aims to unravel, categorize, catalogue, exploit and manage the microbial diversity available in the Mediterranean Sea for addressing bioremediation of polluted marine sites. The idea behind Ulixes is that the multitude of diverse environmental niches of the Mediterranean Sea contains a huge range of microorganisms and their components (e.g. catabolic enzymes) or products (e.g. biosurfactant) that can be exploited in pollutant- and site-tailored bioremediation approaches. Ulixes intends to provide the proof of concept that it is possible to establish and exploit for bioremediation site-specific collections of microbial strains, mixed microbial cultures, enzymes, biosurfactants and other microbial products. These biotechnological resources will be mined by using approaches based on isolation of culturable microorganisms as well as by extensively applying advanced novel 'meta-omics' technologies recently developed by the project partners and exclusively available for Ulixes. Three pollutant classes recognized worldwide as environmental priorities will be considered: petroleum hydrocarbons, chlorinated compounds and heavy metals. A large set of polluted environmental matrices from sites located all over the Mediterranean Sea will be explored, including seashore sands, lagoon sediments, deep sea sediments polluted by heavy oil hydrocarbons at oil tanker shipwreck sites, hypersaline waters and sediments from polluted salty coastal lakes and natural deep hypersaline anoxic submarine basins and mud volcanoes where hydrocarbon seepages occur. The collections of microbial biotechnological products will be exploited for development of novel improved bioremediation processes whose effectiveness will be assessed by ex situ and in situ field bioremediation trials. A careful dissemination action will be pursued to assure that information of the Ulixes results and products is received by stakeholders and SMEs operating in the sector of marine bioremediation.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,993,812.00

PROJECT N°

266473

DURATION

36 months

PROJECT START DATE

February 2011

LIST OF PARTNERS

1. UNIVERSITA DEGLI STUDI DI MILANO (IT)
2. UNIVERSITÉ DE TUNIS (TN)
3. YARMOUK UNIVERSITY (JO)
4. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
5. MUBARAK CITY FOR SCIENTIFIC RESEARCH AND TECHNOLOGY APPLICATIONS (EG)
6. UNIVERSITE HASSAN II AIN CHOCK CASABLANCA (MA)
7. BANGOR UNIVERSITY (UK)
8. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
9. TECHNICAL UNIVERSITY OF CRETE (EL)
10. UNIVERSITEIT GENT (BE)
11. ECOTECHSYSTEMS SRL (IT)
12. ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (IT)

FP7-KBBE-2010-4

ULIXES



Unravelling and exploiting Mediterranean Sea microbial diversity and ecology for Xenobiotics' and pollutants' clean up

www.ulixes.unimi.it



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-5 Environmental biotechnology

WATER4CROPS



Biotechnological waste water treatments and reuse in agronomical systems

Water4Crops provides a combination of technical improvements in the field of bio-treatment and agricultural water use within a transdisciplinary identification of novel agri-business opportunities. Water4Crops aims at a) developing innovative biotechnological wastewater treatments for improved water recycling b) initiating the co-creation of alternative combinations of bio-treatment, recycling of high value elements, and combinations for bioproducts leading to a better commercialization of biotechnology and agricultural products in Europe and India, c)improving water use efficiency at field level through agronomics, plant breeding and locally adapted new irrigation technologies and accurate crop water requirement measurements techniques Water4crops will boost bio-based economy by applying a double track approach. First a comprehensive set of key Green Economy technologies for: 1) valorization of volatile fatty acids, 2) obtaining natural antioxidants (polyphenols), biopolymers (PHAs), energy (biomethane) 3) compounds for selective recovery 4) tailoring effluent properties from decentralized membrane bioreactors 5) greater biomass retention in SBBGR 6) removal of organopollutants by nanobiocatalysts 7) reduced clogging of wetlands 8) virus monitoring detection assays 9) suitable precision irrigation systems for reclaimed water, 10) new monitoring for increase crop water productivity, 11) understanding the genetic mechanisms regulating drought-adaptive traits across maize, sorghum and millet, and 12) optimized waste water related combinations of species/genotypes x environment x management Second new product market combinations will be identified. The co-creation process will be organized by two Mirror cases (Emilia Romagna area and Hyderabad region) within a specific Science-Practice Interface (INNOVA platforms). Developing the new applications and business opportunities with regional enterprises and stakeholder will move India and Europe towards a Green Economy.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,973,689.00

PROJECT N°

311933

DURATION

48 months

PROJECT START DATE

August 2012

LIST OF PARTNERS

1. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
2. NATURAL ENVIRONMENT RESEARCH COUNCIL (UK)
3. FACHHOCHSCHULE NORDWESTSCHWEIZ (CH)
4. ALMA MATER STUDIUM-UNIVERSITA DI BOLOGNA (IT)
5. VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. (BE)
6. TECHNICAL UNIVERSITY OF CRETE (EL)
7. HELMHOLTZ-ZENTRUM FUER UMWELTFORSCHUNG GMBH. UFZ (DE)
8. UNIVERSITA DEGLI STUDI DI CATANIA (IT)
9. INSTITUT NATIONAL DE RECHERCHE EN SCIENCES ET TECHNOLOGIES POUR L'ENVIRONNEMENT ET L'AGRICULTURE (FR)
10. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
11. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
12. CONSORZIO DI BONIFICA DI SECONDO GRADO PER IL CANALE EMILIANO ROMAGNOLO (IT)
13. DEUTSCHE GESELLSCHAFT FUR INTERNATIONALE ZUSAMMENARBEIT (GIZ) GMBH (DE)
14. INOFEA GMBH (CH)
15. SIMA-TEC GMBH (DE)
16. BIONACTIS INTERNATIONAL GROUP (BIG)SA (CH)
17. PHYTOREM SA (FR)
18. BIOPANTA GMBH (DE)
19. ENVINHEALTH ENVIRONMENTAL NUTRITIONAL AND HEALTH SERVICES AE (EL)
20. HORTA SRL (IT)
21. S.T.E.P. RAUTENBACH YUCE GEBEL CONSULTING GMBH (DE)
22. UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA (IT)

FP7-KBBE-2012-6-singlestage

WATER4CROPS

Integrating bio-treated wastewater with enhanced water use efficiency to support the Green Economy in EU and India

Website not available yet





ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-5 Environmental biotechnology

WATERBIOTECH

Coping with water scarcity in developing countries: Role of biotechnology in water treatment – Mandatory ICPC (Africa)

More than water scarcity, diseases and civil wars, Africa is also the least wealthy continent, in terms of economic and financial resources. These combined and tightly linked problems have led to a restricted range of choices, affordable for African countries, to deal particularly with the water issue, as a major topic. Polluted water treatment before use has been their almost unique solution to deal with a growing water scarcity. The treatment of water and elimination of pollutants, mainly pathogenic organisms, xenobiotics and heavy metals, although itself presents significant challenges, is crucial for human health and environmental considerations. However, most regions in developing countries cannot afford the costs of advanced and specialized systems.

Numerous water cleaning methods are based in natural, plants or micro-organisms, biochemical processes. Biotechnology is a useful tool that is delivering improved products and process for environmental sustainability, and promises a range of benefits to manage the industrial WW economically and effectively around the world. Some biotechnological techniques are quite sophisticated but others are simple, cost effective and adapted to local conditions and resources of developing countries.

These natural biological treatment systems include lagooning, land treatment, phytodepuration, or constructed wetlands systems. They can be applied as secondary or tertiary purification treatment, allowing the removal of pathogenic microorganisms and the degradation of the organic pollutants, so that waste water can be recycled for irrigation and domestic use and hence reduce the pressure on the hydric resources. Other biotechnological techniques to be taken into account within this proposal are biofiltration, membrane bioreactors and algae and other aquatic crops' application for wastewater purification.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,528.00

PROJECT N°

265972

DURATION

30 months

PROJECT START DATE

August 2011

LIST OF PARTNERS

1. VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. (DE)
2. BIOAZUL (ES)
3. CENTRE DE BIOTECHNOLOGIE DE SFAX - CBS (TN)
4. UNIVERSITAET FUER BODENKULTUR WIEN (AT)
5. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
6. UNIVERSITY OF BATH (UK)
7. CENTRE INTERNATIONAL DES TECHNOLOGIES DE L'ENVIRONNEMENT DE TUNIS (TN)
8. INTERNATIONAL WATER MANAGEMENT INSTITUTE IWMI (LK)
9. UNIVERSITE PAUL CEZANNE AIX MARSEILLE III (FR)
10. UNIVERSITAT POLITECNICA DE CATALUNYA (ES)
11. CENTRE REGIONAL POUR L'EAU POTABLE ET L'ASSAINISSEMENT A FAIBLE COUT (BF)
12. UNIVERSITAET BREMEN (DE)
13. NATIONAL RESEARCH CENTER (EG)
14. UNIVERSITE CHEIKH ANTA DIOP DE DAKAR (SN)
15. UNIVERSITE CADI AYYAD (MA)
16. CENTRE DE DEVELOPPEMENT DES ENERGIES RENOUVELABLES CDER (DZ)
17. KING SAUD UNIVERSITY (SA)

FP7-AFRICA-2010

WATERBIOTECH



Biotechnology for Africa's sustainable water supply

<http://waterbiotech.eu>



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-6 Emerging trends in biotechnology

ALLBIO



Supporting the development of Bioinformatics Infrastructures for the effective exploitation of genomic data: Beyond health applications

The main aim of AllBio will be the coordination of the partner's activities that are aimed at the extension of a large number of bioinformatics facilities towards applicability in target life science areas beyond human health. Bioinformatics facilities developed for the human health area will be extensively tested on unicellular (incl. bacterial), plant and (farm) animal genomes, and they will be tightly integrated in the wider frame-work of Elixir infrastructure activities. AllBio will develop a coordinated action plan for the harvest of the information from 'omics' data related to other species than Homo sapiens.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,915.00

PROJECT N°

289452

DURATION

36 months

PROJECT START DATE

October 2011

LIST OF PARTNERS

1. SVERIGES LANTBRUKSUNIVERSITET (SE)
2. STICHTING KATHOLIEKE UNIVERSITEIT (NL)
3. SWISS INSTITUTE OF BIOINFORMATICS (CH)
4. THE UNIVERSITY OF MANCHESTER (UK)
5. CONSIGLIO NAZIONALE DELLE RICERCHE (IT)
6. CSC-TIETEEN TIETOTEKNIKAN KESKUS OY (FI)
7. UNIVERSITE LIBRE DE BRUXELLES (BE)
8. KAROLINSKA INSTITUTET (SE)
9. UNIVERSITAET POTSDAM (DE)
10. EUROPEAN MOLECULAR BIOLOGY LABORATORY (DE)

FP7-KBBE-2011-5

ALLBIO



Broadening the Bioinformatics Infrastructure to unicellular, animal, and plant science

www.allbioinformatics.eu



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-6 Emerging trends in biotechnology

BASYNTHEC



Synthetic biology for biotechnological applications

BaSynthec will combine computational and experimental biology approaches with novel high-throughput methodologies to reduce and modify à la carte the chromosome of *Bacillus subtilis*, a genetically tractable bacterium and one of the key microbes used as a Cell Factory in biotechnology. Simpler *B. subtilis* strains with reduced energy consumption for self maintenance will be designed and constructed by removing some potentially expensive cellular processes. The cells with the lowest experimentally determined waste of energy and with industrially relevant phenotypes will be engineered to reroute the flux devoted to biomass formation through rational modifications of the complex metabolic regulations, and will be used as biotechnological platforms to plug in synthetic modules. For this purpose, BaSynthec will develop a model-driven approach to design and engineer the strains with predetermined features, with a particular focus on unrestricted metabolic activity and the plug-in of synthetic functional modules. This strategy is based on the recent development of two complementary modelling approaches for *B. subtilis*: i) a genome-scale model of genetic and metabolic regulatory networks associated with a novel method called "Resource Balance Analysis" defining the formal background of model-based approaches for engineering strains; and ii) the development of a new genome-scale metabolic model of *B. subtilis* which is the most complete and accurate that exists today. Two pathways of high biotechnological relevance will be used for establishing the proof-of-principle of the assembly of functional synthetic modules: i) the vitamin B5 biosynthetic pathway, and ii) the secretion machinery for the export of extra-cellular enzymes. It is anticipated that validated simpler bacterial strains together with the modelling framework generated by BaSynthec will be used as generic biotechnological platforms to better control and exploit cell metabolism in industrial processes.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,993,162.00

PROJECT N°

244093

DURATION

36 months

PROJECT START DATE

June 2010

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. ACADEMISCH ZIEKENHUIS GRONINGEN (NL)
3. THE UNIVERSITY OF CHICAGO (US)
4. DSM NUTRITIONAL PRODUCTS LTD (CH)
5. EIDGENÖSSISCHE TECHNISCHE HOCHSCHULE ZÜRICH (CH)
6. ERNST-MORITZ-ARNDT-UNIVERSITÄT GREIFSWALD (DE)
7. INRA TRANSFERT S.A. (FR)
8. NOVOZYMES A/S (DK)

FP7-KBBE-2009-3

BASYNTHEC

Bacterial Synthetic Minimal Genomes for Biotechnology

www.basynthec.eu

ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-6 Emerging trends in biotechnology

BIOLEDGE



Increasing the accessibility, usability and predictive capacities of bioinformatics tools for biotechnology applications

Better bioinformatics tools are needed to capitalize on vast amounts of data becoming accessible in biotechnology applications. The theme of this collaborative project is protein production for biotechnology applications. The concept is that (1) protein production is an important topic in biotechnology, with application ranging from production of therapeutic proteins for the pharmaceutical industry to uses in industrial biotechnology and in biorefineries, (2) vast amounts of genomic and post-genomic data from industrial microorganisms and mutants are being generated using new technologies such as next-generation sequencing, (3) tools and computational platforms which could capitalize on such new data in the context of protein production for biotechnology applications are lacking, and (4) advanced systems biology modelling tools exist or are being developed which aim to reconstruct biological networks from the genomic and post-genomic data, opening new opportunities in biotechnology applications.

The overall objective is to develop bioinformatics and related modelling and computing platforms to support biotechnology application in the domain of protein production. The expected impact is that the development of bioinformatics tools and platforms to better exploit the currently available and newly generated data in specific industrial biotechnology application will (1) open new opportunities in industrial biotechnology applications and (2) benefit the participating SMEs as tool/platform providers or end users.

The project has brought together scientists and industry partners in domains of bioinformatics, high-performance computing, systems biology, knowledge management, and industrial biotechnology. The individual participants are highly experienced scientists with excellent publication records and most of them also have experience in the participation in EU programmes. Each individual participant contributes relevant experiences to the project.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,995,862.00

PROJECT N°

289126

DURATION

48 months

PROJECT START DATE

October 2011

LIST OF PARTNERS

1. TEKNOLOGIAN TUTKIMUSKESKUS VTT (FI)
2. NORAY BIOINFORMATICS SL (ES)
3. TECHILA TECHNOLOGIES OY (FI)
4. UNIVERSIDAD DE MALAGA (ES)
5. C-LECTA GMBH (DE)
6. HELSINGIN YLIOPISTO (FI)
7. THE CHANCELLOR, MASTERS AND SCHOLARS OF THE UNIVERSITY OF CAMBRIDGE (UK)
8. AALTO-KORKEAKOULUSAATIO (FI)

FP7-KBBE-2011-5

BIOLEDGE

BIO knowLEDGe Extractor and Modeller for Protein Production

www.bioledge.eu


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-6 Emerging trends in biotechnology

BIOMONAR



Nanobiotechnology: bio-interfaces for environmental applications

BIOMONAR develops multiplexed nanoarray biosensors for environmental targets, i.e. pollutants and pathogens. The innovative approach engineers three sensor platforms (surface, liposomal, living cell) which exploit a panel of periplasmic binding proteins (PBPs) as the common selective element. The nanoarrays are integrated into a microfluidics system for in-situ monitoring. The strategy allows for selective and sensitive detection of target compounds in complex environmental mixtures. The sensor platforms probe different aspects in the 'exposure to effect' chain of processes: each responds to a certain proportion of the total target concentration and has a characteristic dynamic window. The sensor signals are quantitatively interpreted and represented in terms of the spectra of reactivities and fluxes of the target compounds. This level of sophistication, coupled with the common PBP selective component, allows a coherent elucidation of the link between dynamic target speciation and predicted ecotoxicological impact. The optimisation and dedication of the sensors for environmental monitoring inherently involves physicochemical characterisation of the various bio/nonbio and bio/bio interfacial processes at nanoscale. The ensuing knowledge on the interaction of nanostructured surfaces with biological systems facilitates design of sensors for new targets, thus providing technical opportunities for the biosensor industry.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,997,486.00

PROJECT N°

244405

DURATION

48 months

PROJECT START DATE

April 2010

LIST OF PARTNERS

1. SYDDANSK UNIVERSITET (DK)
2. UNIVERSITE DE LAUSANNE (CH)
3. JRC -JOINT RESEARCH CENTRE- EUROPEAN COMMISSION (BE)
4. WAGENINGEN UNIVERSITEIT (NL)
5. THE HEBREW UNIVERSITY OF JERUSALEM (IL)
6. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
7. CORNELL UNIVERSITY (US)
8. LIONIX BV (NL)
9. MICRODISH BV (NL)
10. APPLIKON ANALYTICAL (NL)

FP7-KBBE-2009-3

BIOMONAR



Biosensor nanoarrays for environmental monitoring

www.sdu.dk/en/om_sdu/institutter_centre/fysik_kemi_og_farmaci/forskning/forskningsgrupper/raewyn_m_town/biomonar



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-6 Emerging trends in biotechnology

BIOPREDYN



Increasing the accessibility, usability and predictive capacities of bioinformatics tools for biotechnology applications

Currently, biologists are collecting enormous amounts of 'omics' data in a vast number of different databases. Predictive, data-driven computational models are needed to understand the complex, multi-scale biological networks underlying these high-throughput datasets. Such models are non-linear and contain many parameters, which are difficult (or impossible) to measure directly. Instead, parameters need to be inferred from data. This approach is called reverse-engineering. It has tremendous potential for several areas, such as biotechnology and systems biology, since it allows us to develop models with unprecedented accuracy and predictive power. This is achieved through an iterative refinement of our models compared to quantitative 'omics' data, a process called the systems-biology modelling cycle. Many methods have been developed that deal with specific steps in this cycle (data analysis, model building/discrimination, parameter estimation/identifiability analysis, uncertainty quantification, and optimal experimental design), but we still lack an over-arching, easy-to-use software framework that supports the modelling cycle in its entirety, allowing its widespread application. This project aims at improving accessibility of the data, and developing novel algorithms and tools implemented in such a general framework, which will enable the efficient transfer of cutting-edge modelling and optimisation methods from an academic research setting to private biotechnology partners. We will use representative biological and biotechnological applications as benchmark problems to develop robust and generally applicable methodology. The availability of such tools to the biotechnology sector (and other industries) will greatly enhance our ability to design and optimise complex production processes, especially those of nutraceuticals, biopharmaceuticals, or fine chemicals based on engineered organisms such as bacteria, yeast or plants.

PROJECT COORDINATOR

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- FUNDACIO PRIVADA CENTRE DE REGULACIO GENOMICA (ES)

FUNDING SCHEME

CP

EC CONTRIBUTION €

3,000,000.00

PROJECT N°

289434

DURATION

36 months

PROJECT START DATE

October 2011

LIST OF PARTNERS

1. FUNDACIO PRIVADA CENTRE DE REGULACIO GENOMICA (ES)
2. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
3. EUROPEAN MOLECULAR BIOLOGY LABORATORY (DE)
4. UNIVERSITEIT VAN AMSTERDAM (NL)
5. STICHTING CENTRUM VOOR WISKUNDE EN INFORMATICA (NL)
6. FONDAZIONE TELETHON (IT)
7. THE UNIVERSITY OF MANCHESTER (UK)
8. THE UNIVERSITY OF SHEFFIELD (UK)
9. THE COSMO COMPANY SAS (FR)
10. INSILICO BIOTECHNOLOGY AG (DE)
11. FLUXOME SCIENCES A/S (DK)

FP7-KBBE-2011-5

BIOPREDYN

From Data to Models: New Bioinformatics Methods and Tools for Data-Driven Predictive Dynamic Modelling in Biotechnological Applications

www.biopredyn.eu


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-6 Emerging trends in biotechnology

DINAMO



Nanobiotechnology: smart devices to study biomolecule dynamics in real time

Dynamic information about biomolecular processes in living cells is important for fundamental understanding of cellular functions, which is one of the primary targets of molecular cell-biology with important applications to pharmacology. However further progress in this field, and this specifically for monitoring genomic processes, there is immense need for developing sensing and detection techniques that can operate with sufficient submicroscopic resolution inside the living cells and bringing real-time information about local biomolecular interactions. The present proposal makes a further, large step towards integration of forefront nanotechnology, chemistry and molecular biology expertise with a common goal of studying intracellular processes during the evolution steps of several types of frequently occurring cancers. This will create a novel tool studying the molecular processes in cells on nanoscale, which is the objective of this call. The aim of the DINAMO project is to develop the nanodiamond particle (NDP) non-invasive label-free nanotechnology platform for real-time monitoring (1) of living cells modified by oncogenic impact, (2) of the kinetics of gene-assisted processes in the cells. Based on the development work of DINAMO, we propose to apply to apply luminescent and single spin detection techniques for real-time dynamic monitoring of biomolecular processes in cells.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,787,892.00

PROJECT N°

245122

DURATION

36 months

PROJECT START DATE

May 2010

LIST OF PARTNERS

1. INTERUNIVERSITAIR MICRO-ELECTRONICA CENTRUM VZW (BE)
2. UNIVERSITAET STUTTGART (DE)
3. JULIUS-MAXIMILIANS UNIVERSITAET WUERZBURG (DE)
4. USTAV ORGANICKE CHEMIE A BIOCHEMIE, AV CR, V.V.I. (CZ)
5. MIKROBIOLOGICKY USTAV. AVCR, V.V.I. (CZ)
6. NORTHWESTERN UNIVERSITY (US)
7. GENERI BIOTECH (CZ)
8. GRIFFITH UNIVERSITY (AU)

FP7-KBBE-2009-3

DINAMO



Development of diamond intracellular nanoprobes for oncogen transformation dynamics monitoring in living cells

www.fp7-dinamo.eu



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-6 Emerging trends in biotechnology

ERASYNBIO



Synthetic Biology– ERA-NET

Synthetic biology is an emerging and promising research area with the potential to have a strong impact on innovation and technological progress that is beneficial for the economy and for society as a whole. It is an area at the intersection of engineering, bioscience, chemistry, and information technology.

The central idea of ERASynBio is to promote the robust development of synthetic biology by structuring and coordinating national efforts and investment. ERASynBio will develop a white paper (WP1), which will support the emergence of national synthetic biology programmes and which will lay the ground for transnational funding activities via joint calls in the project (WP6). ERASynBio will stimulate and tackle the interdisciplinary nature and immaturity by offering training and educational possibilities (WP4), establishing an interdisciplinary advisory board and inviting observers of other funding organisations. It will further provide extensive dialogue options (WP1-5) and exchange fora (WP3) for the scientific community. Close collaboration between academia and industry aiming to fertilize the innovation process will occur on several levels (WP1, WP3, WP6). To adhere to ethical, legal and societal aspects as well as to technical issues like standardisation and infrastructure development ERASynBio will trace and integrate the ongoing work and research on these framework conditions and integrate them in the white paper (WP2 and WP5).

It is a challenge for the ERA-Net to successfully coordinate the newly emerging activities in this field as only a few partners have fully developed national programmes for synthetic biology. Thus it is the aim to create the ERA of synthetic biology in parallel with the development of the scientific community. It is the first time a truly European research community can be build almost from the beginning of its development.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

1,997,022.00

PROJECT N°

291728

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. FORSCHUNGSZENTRUM JUELICH GMBH (DE)
2. BUNDESMINISTERIUM FUER BILDUNG UND FORSCHUNG (DE)
3. BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL (UK)
4. OESTERREICHISCHE FORSCHUNGSFOERDERUNGSGESELLSCHAFT MBH (AT)
5. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
6. MINISTERIO DE CIENCIA E INNOVACION (ES)
7. SUOMEN AKATEMIA (FI)
8. GENIKI GRAMMATIA EREVNAS KAI TECHNOLOGIAS, YPOURGIO PAIDIAS, DIA VIOU MATHISIS & THRSISKEVMATON (EL)
9. NEDERLANDSE ORGANISATIE VOOR WETENSCHAPPELIJK ONDERZOEK (NL)
10. FUNDACAO PARA A CIENCIA E A TECNOLOGIA (PT)
11. MINISTRSTVO ZA VISOKO SOLSTVO, ZNANOST IN TEHNOLOGIJO (SI)
12. LATVIJAS ZINATNU AKADEMIJA (LV)
13. AGENCE NATIONALE DE LA RECHERCHE (FR)
14. NORGES FORSKNINGSRAD (NO)
15. FORSKNINGS- OG INNOVATIONSSTYRELSEN (DK)
16. EIDGENOESSISCHES VOLKSWIRTSCHAFTSDEPARTEMENT (CH)

FP7-ERANET-2011-RTD

ERASYNBIO

Development and Coordination of Synthetic Biology in the European Research Area

www.erasynbio.net



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-6 Emerging trends in biotechnology

MEM-S

Nanobiotechnology: functionalised membranes

There is strong interest in the development of novel functionalized membranes which can be used as microsieves, as a component of integrated analytical systems, in food processing, drug discovery and diagnostic applications. This project is based on a combination of three break-through technologies, developed by the applicants in the past, with high impact for nano(bio)technological application: (i) the S-layer technology allowing the construction of nanoporous protein lattices, (ii) the biocatalytic formation of inorganic materials by silicatein, a group of unique enzymes capable to catalyze the formation of porous silica from soluble precursors, and (iii) the sol-gel technique for encapsulation (immobilization) of biomolecules serving as biocatalyst or as a component of sensors. The goal of this project is to design and fabricate - based on molecular biology inspired approaches - nano-porous bio-inorganic membranes with novel functionalities for industrial application. These membranes will be formed by S-layer proteins, which are able to assemble to highly ordered structures of defined pore-size, and recombinant silicateins or silicatein fusion proteins. The hydrated silica glass layer formed by silicatein will be used to encase biocatalysts (enzymes) or antibodies against small molecules as sample prep- or sensor components of integrated systems. The innovative type of the functionalized membranes developed in this project thus exploits two principles: (i) protein self-assembly and - and this has not been done before - (ii) enzymatic (silicatein-mediated) deposition of inorganic material used for reinforcement of the membranes as well as for encasing biomolecules, providing the membranes with new functionalities. The new technique will be exploited by three research-based SMEs and the enduser involved in the project, in microfluidics based sample processing and micro-array development, in industrial nanosieves, as well as in sensors in drinking water systems.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,816,819.00

PROJECT N°

244967

DURATION

36 months

PROJECT START DATE

January 2010

LIST OF PARTNERS

1. UNIVERSITÄTSMEDIZIN DER JOHANNES GUTENBERG-UNIVERSITÄT MAINZ (DE)
2. UNIVERSITÄT FUER BODENKULTUR WIEN (AT)
3. WAGENINGEN UNIVERSITEIT (NL)
4. UNIVERSITE PIERRE ET MARIE CURIE - PARIS 6 (FR)
5. NANOTECHMARIN GMBH (DE)
6. AQUAMARIJN MICRO FILTRATION BV (NL)
7. LIONIX BV (NL)
8. IWW RHEINISCH WESTFALISCHES INSTITUT FÜR WASSERFORSCHUNG GEMEINNUTZIGE GMBH (DE)

FP7-KBBE-2009-3

MEM-S

Bottom-up design and fabrication of industrial bio-inorganic nano-porous membranes with novel functionalities based on principles of protein self-assembly and biomineralization

www.eu-mem-s.de



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-6 Emerging trends in biotechnology

METACODE



Applying Synthetic Biology principles towards the cell factory notion in biotechnology

The concept of METACODE is to preform genetic code engineering in microbial strains with parallel recruitment of novel bio-orthogonal chemistries for mass production of desired protein/peptide based products. In combination with computational and classical chemical synthetic approaches as well as chemo-informatics, enzyme guided evolution, synthetic metabolism, and directed evolution of microbial strains, artificial industrial microbial strains will be designed. This will enable the access to genetically robust and safe strains with added/novel functionalities and topologies from renewable resources. These strains will be characterized with alternative reading of the genetic code (genetic firewall) and with predetermined chemistries (metathesis), as well as necessary robustness for efficient industrial use.

PROJECT COORDINATOR

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- TECHNISCHE UNIVERSITAT BERLIN (DE)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,996,938.00

PROJECT N°

289572

DURATION

48 months

PROJECT START DATE

December 2011

LIST OF PARTNERS

1. TECHNISCHE UNIVERSITAT BERLIN (DE)
2. ISTHMUS (FR)
3. Eidgenössische Technische Hochschule ZÜRICH (CH)
4. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
5. UNIVERSITAET BASEL (CH)
6. COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (FR)
7. MOLECULAR NETWORKS GMBH. COMPUTERCHEMIE (DE)
8. BIOFACTION KG (AT)

FP7-KBBE-2011-5

Code-engineered new-to-nature microbial cell factories for novel and safety enhanced bio-production

METACODE

www.bsse.ethz.ch/bpl/research/systems/metacode


ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-6 Emerging trends in biotechnology

MICROME



Bio-informatics - Microbial genomics and bio-informatics

The exponential increase in microbial genome and metagenome sequencing throughput has widened the gap between sequence and functional understanding. A clear picture of metabolic processes across the spectrum of bacterial species is essential to enable the exploitation of microbial genomics for the purposes of environmental biotechnology. The Microme project endeavors to extend the scope of microbial genome annotation from functional assignment at the gene level to the systematic generation of pathway assemblies and genome-scale metabolic models. A few key ideas and design principles will enable the Microme reconstruction pipeline to achieve this ambitious goal. A clear definition of a metabolic pathway as a collection of reaction sets, each of which convert the same defined inputs into the same outputs, will allow species-specific pathway variants to be identified, assembled into networks, compared across species, and used for downstream computations. A unique pathways projection, curation and assembly cycle, feeding directly into the flow of newly sequenced genomes, will allow a qualitative increase in the speed and reliability of the pathway generation process. Pathways and models produced the pipeline will be accessible to the scientific community as an integrated resource via the Microme portal. Finally, taking advantage of the availability of pathway assemblies from a large sample of genomes, methods for comparative and phylogenetic analyses and novel metabolic engineering strategies for environmental biotechnology goals will be developed, applied to proof-of-concept studies, and integrated to the resource as an analytical tool layer. Microme will be supported by a robust bioinformatics infrastructure, developed by integrating a set of established European databases and tools, integrated with reference protein annotation, metabolites and reactions databases, and interfaced with the annotation pipelines of the two main European sequencing centers.

PROJECT COORDINATOR

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- EUROPEAN MOLECULAR BIOLOGY LABORATORY (DE)

FUNDING SCHEME

CP

EC CONTRIBUTION €

5,263,150.00

PROJECT N°

222886-2

DURATION

48 months

PROJECT START DATE

December 2009

LIST OF PARTNERS

1. EUROPEAN MOLECULAR BIOLOGY LABORATORY (DE)
2. COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (FR)
3. CENTRE FOR RESEARCH AND TECHNOLOGY HELLAS (EL)
4. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
5. FUNDACION CENTRO NACIONAL DE INVESTIGACIONES ONCOLOGICAS CARLOS III (ES)
6. LEIBNIZ-INSTITUT DSMZ-DEUTSCHE SAMMLUNG VON MIKROORGANISMEN UND ZELLKULTUREN GMBH (DE)
7. HELMHOLTZ-ZENTRUM FUER INFektionsFORSCHUNG GMBH (DE)
8. ISTHMUS (FR)
9. MOLECULAR NETWORKS GMBH. COMPUTERCHEMIE (DE)
10. SWISS INSTITUTE OF BIOINFORMATICS (CH)
11. UNIVERSITE LIBRE DE BRUXELLES (BE)
12. GENOME RESEARCH LIMITED (UK)
13. TEL AVIV UNIVERSITY (IL)
14. CEPRODI COMPAGNIE EUROPEENNE DE PRODUITS DIABETIQUES (FR)
15. WAGENINGEN UNIVERSITEIT (NL)
16. AMABIOTICS SAS (FR)

FP7-KBBE-2007-2A

The Microme Project: A Knowledge-Based Bioinformatics Framework for Microbial Pathway Genomics

MICROME

www.microme.eu



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-6 Emerging trends in biotechnology

NANOBE



Nanobiotechnology based biosensors for optimised bioprocesses

There is a growing need for effective monitoring of the micro-organisms and bioprocesses used in the sustainable production of fuels, pre-cursor chemicals and pharmaceuticals. The NANOBE consortium will develop a compact, flexible analysis tool for reaction monitoring applications in the industrial biotechnology industry.

The result of NANOBE will be an integrated measurement platform for real-time monitoring of industrial bioprocesses. This versatile platform will enable simultaneous analysis of dozens of analytes, including strains, product profiles and intracellular biomarkers. The platform will be composed of multiple 'lab-on-chip' modules.

Together, these modules will measure a broad range sample types, including small molecules, proteins, enzymes, metabolites, specific mRNAs and entire cells.

The measurement platform will be a significant improvement in terms of automation, analysis time and sensitivity. The analysis platform will permit real-time feedback control of large-scale production processes, screening of production organisms and optimisation of reaction conditions.

The platform is designed to be flexible so that it can be applied either as a system to monitoring complex processes, or as individual components for analysis of specific characteristics.

The NANOBE consortium combines world-class expertise in microfluidics, nano- and microfabrication techniques, chip-scale mass spectrometry, photonics, electronics, sensor technologies, and biotechnology.

Of the nine partners, 4 are companies (4 SMEs).

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

2,995,082.00

PROJECT N°

227243

DURATION

36 months

PROJECT START DATE

April 2009

LIST OF PARTNERS

1. VALTION TEKNILLINEN TUTKIMUSKESKUS (FI)
2. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (CNRS) (FR)
3. ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE (CH)
4. ALBERT-LUDWIGS-UNIVERSITAET FREIBURG (DE)
5. INSTITUT FÜR BIOPROZESS- UND ANALYSENMESSTECHNIK E.V. (DE)
6. PRESENS PRECISION SENSING GMBH (DE)
7. DIAGNOSWISS SA (CH)
8. MICROSAIC SYSTEMS (UK)
9. GALILAEUS OY (FI)

FP7-KBBE-2008-2B

NANOBE

Nano- and microtechnology -based analytical devices
for online measurements of bioprocesses

www.vtt.fi/sites/nanobe



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-6 Emerging trends in biotechnology

NEWPROT



Increasing the accessibility, usability and predictive capacities of bioinformatics tools for biotechnology applications

Two academic groups and eight SMEs who all work on different aspects of protein engineering will collaborate and produce a website that will consist of a portal with an embedded workbench to provide users a self-service system for in silico protein engineering. This interactive self-service portal will give users access to a wide variety of protein engineering facilities and information systems, and will allow them to interactively work with a comprehensive set of well-documented, well-integrated computational protein engineering tools. The databases that will be provided will be curated, and the software and protocols will be validated by performing a variety of protein engineering experiments on a series of enzyme classes. The portal and the interactive workbench will be freely available, and they will be solidly based in modern information technology. The usability for protein engineering will be thoroughly experimentally validated.

PROJECT COORDINATOR

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- STICHTING KATHOLIEKE UNIVERSITEIT (NL)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,258,800.00

PROJECT N°

289350

DURATION

48 months

PROJECT START DATE

December 2011

LIST OF PARTNERS

1. STICHTING KATHOLIEKE UNIVERSITEIT (NL)
2. ERNST-MORITZ-ARNDT-UNIVERSITÄT GREIFSWALD (DE)
3. BIO-PRODUCT BV (NL)
4. ENZYMICALS AG (DE)
5. YASARA BIOSCIENCES GMBH (AT)
6. INGENZA LIMITED (UK)
7. S.A.F.A.N. BIOINFORMATICS. SAS DI PUGLIESE LUISA (IT)
8. FLUID OPERATIONS AG (DE)
9. LEAD PHARMA HOLDING BV (NL)
10. ENANTIS S.R.O (CZ)

FP7-KBBE-2011-5

NEWPROT



An interactive protein engineering portal with validated software and database facilities

<http://swift.cmbi.ru.nl/gv/newprot/>



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-6 Emerging trends in biotechnology

PROMYSE



Applying Synthetic Biology principles towards the cell factory notion in biotechnology

There is a high societal need for a sustainable production of key chemistry, food and health care compounds. Microbial cell factories are logical production systems, but up to now they use sugars and other food derived raw materials as substrates. Sugars originating from plants demand cultivable land which is more and more needed for human nutrition. Methanol - with a worldwide production capacity of more than 46 million tons per year - is regarded as an alternative highly attractive raw material in microbial fermentation for the manufacturing of special, fine, bulk, and fuel chemicals. This is especially true for the EU market, where industrial biotechnology still is hampered by strict use and price regulations as well as import limitations for agricultural commodities, such as corn or sugar. The supply of methanol can base upon both fossil and renewable resources, rendering it a highly flexible and sustainable raw material. Our vision is a viable methanol-based European bio-economy, which we will promote by for the first time applying synthetic biology principles for cell factory development in order to harness methanol as a general feedstock for the manufacturing of special and fine chemicals. In nature, methylotrophic microorganisms can utilize methanol as their sole source of carbon and energy. The project PROMYSE will deliver an alternative route to sought-after chemicals, with a major focus on terpenoids. PROMYSE combines two frontline research topics: orthogonal modularization of methylotrophy within a Synthetic Biology concept and employing methanol as a feedstock for biotechnological production. Through the transfer of methylotrophy modules, Synthetic Biology will pave the way to capitalize on the metabolic versatility and engineered production pathways of genetically well tractable microorganisms, such as *E. coli*, *B. subtilis* and *C. glutamicum* for biotransformation from methanol.

PROJECT COORDINATOR

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- STIFTELSEN SINTEF (NO)

FUNDING SCHEME

CP

EC CONTRIBUTION €

2,968,759.00

PROJECT N°

289540

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. STIFTELSEN SINTEF (NO)
2. EIDGENOESSISCHE TECHNISCHE HOCHSCHULE ZURICH (CH)
3. UNIVERSITAET BIELEFELD (DE)
4. RIJKSUNIVERSITEIT GRONINGEN (NL)
5. INSTITUT NATIONAL DES SCIENCES APPLIQUEES DE TOULOUSE INSAT (FR)
6. DECHEMA GESELLSCHAFT FUER CHEMISCHE TECHNIK UND BIOTECHNOLOGIE E.V. (DE)
7. INSILICO BIOTECHNOLOGY AG (DE)
8. PROMAR AS (NO)
9. BASF SE (DE)

FP7-KBBE-2011-5

Products from methanol by synthetic cell factories

PROMYSE

www.sintef.no/Projectweb/PROMYSE/




ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-6 Emerging trends in biotechnology

ST-FLOW

Towards standardisation in Synthetic Biology

The ST-FLOW Project merges the efforts of 15 leading European and US research groups for developing material and computational standards that enable the forward-design of prokaryotic systems with a degree of robustness and predictability that is not possible with customary Genetic Engineering. The central issue at stake is the identification and implementation of rules that allow the conversion of given biological parts assembled with a set of principles for physical composition into perfectly predictable functional properties of the resulting devices, modules and entire systems. ST-FLOW focuses on each of the steps that go from assembling a DNA sequence encoding all necessary expression signals in a prokaryotic host (by default, *E. coli*) all the way to the making of the final product or to the behaviour of single cells and populations. Two complementary approaches will be adopted to solve the conundrum of physical composition vs. biological functionality of thereby engineered devices. In one case (bottom up), large combinatorial libraries of gene expression signals will be merged with suitable reporter systems and the input/output functions examined and parameterized in a high-throughput fashion. The expected outcome of this effort is to establish experience-based but still reliable rules and criteria for the assembly of new devices and systems -following the same physical composition rules or adopting CAD design. Yet, many outliers (combinations that do not follow the rules) are expected, and making sense of them will be the task of the complementary top-down approach. In this case, ST-FLOW will revisit some of gaps in our knowledge of the gene expression flow (transcription, mRNA fate, translation) that need to be addressed for engineering functional devices from first principles. Ethical, legal and societal issues will also be examined in a context of public dialogue and sound science communication.

PROJECT COORDINATOR

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FUNDING SCHEME

CP

EC CONTRIBUTION €

5,998,742.00

PROJECT N°

289326

DURATION

48 months

PROJECT START DATE

December 2011

LIST OF PARTNERS

1. AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS (ES)
2. IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE (UK)
3. EIDGENÖSSISCHE TECHNISCHE HOCHSCHULE ZÜRICH (CH)
4. THE UNIVERSITY OF BIRMINGHAM (UK)
5. INSTITUTO DE TECNOLOGIA QUIMICA E BIOLÓGICA. UNIVERSIDADE NOVA DE LISBOA (PT)
6. CENTRE NATIONAL DE LA RECHERCHE SCIENTIFIQUE (FR)
7. LIFEWIZZ LDA (PT)
8. UNIVERSITE DE LAUSANNE (CH)
9. BIO-ILIBERIS RESEARCH AND DEVELOPMENT (ES)
10. UNIVERSITAET STUTTGART (DE)
11. UNIVERSITAT DE VALENCIA (ES)
12. BIOFACTION KG (AT)
13. TECHNISCHE UNIVERSITAET MUENCHEN (DE)
14. THE UNIVERSITY OF EDINBURGH (UK)

FP7-KBBE-2011-5

ST-FLOW



Standardization and orthogonalization of the gene expression flow for robust engineering of NTN (new-to-nature) biological properties.

www.cnb.csic.es/~stflow-project



ACTIVITY 2.3 - BIOTECHNOLOGIES

KBBE-2-3-6 Emerging trends in biotechnology

SYSINBIO



Improved microbes - Metabolic engineering and modelling

Metabolic engineering is an applied science focusing on developing new cell factories or improving existing ones. Metabolic engineering is an enabling science, and distinguishes itself from applied genetic engineering by the use of advanced analytical tools for identification of appropriate targets for genetic modifications and the use of mathematical models to perform in silico design of optimized cell factories. In recent years, there has been increasing focus on using mathematical models for design. SYSIBIO will coordinate European activities in the field of model driven metabolic engineering and also coordination of activities on other technologies required for state of the art metabolic engineering, e.g. metabolomics and fluxomics. The coordination of activities will involve establishing a database containing metabolic models for different industrially important microorganisms. The database will also contain different simulation tools required for use of these models to identify metabolic engineering targets and use of these models for analysis of omics data. SYSINBIO will also coordinate the further development of techniques required for metabolic engineering, such as metabolomics, fluxomics and identification of mutations in evolved strains. Furthermore, an important part of SYSINBIO will be coordination of education and training in the field of metabolic engineering in Europe.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

996,545.00

PROJECT N°

212766

DURATION

36 months

PROJECT START DATE

December 2008

LIST OF PARTNERS

1. CHALMERS TEKNISKA HOEGSKOLA AB (SE)
2. DANMARKS TEKNISKE UNIVERSITET (DK)
3. VALTION TEKNILLINEN TUTKIMUSKESKUS (FI)
4. ECOLE POLYTECHNIQUE FEDERALE DE LAUSANNE (CH)
5. UNIVERSITAET STUTTGART (DE)
6. TECHNISCHE UNIVERSITEIT DELFT (NL)
7. UNIVERSITA' DEGLI STUDI DI MILANO-BICOCCA (IT)
8. UNIVERSIDADE DO MINHO (PT)
9. UNIVERSITAET SIEGEN (DE)
10. EIDGENÖSSISCHE TECHNISCHE HOCHSCHULE ZÜRICH (CH)
11. UNIVERSITAET DES SAARLANDES (DE)
12. LUNDS UNIVERSITET (SE)
13. BOGAZICI UNIVERSITY* (TR)
14. FLUXOME SCIENCES A/S (DK)
15. NOVOZYMES A/S (DK)
16. CHR. HANSEN A/S (DK)
17. STIFTELSEN FRAUNHOFER-CHALMERS CENTRUM FOR INDUSTRIEMATEMATIK (SE)
18. BASF SE (DE)
19. DSM FOOD SPECIALTIES BV (NL)
20. EVONIK DEGUSSA GMBH (DE)
21. METABOLIC EXPLORER SA (FR)

FP7-KBBE-2007-1

SYSINBIO



Systems Biology as a Driver for Industrial Biotechnology

www.sysbio.se/SYSINBIO




ACTIVITY 2.3 - BIOTECHNOLOGIES

KBB-2-4 Other Activities

BIO TRIANGLE

Streamlining bio-research in Australia, Canada, New Zealand and the United States with Europe through multilateral cooperation activities

BIO TRIANGLE brings together the leaders in BIO-research from Europe and four industrialised Third Countries – which together form a imaginary TRIANGLE around our globe. The project's objective is to foster scientific and technological cooperation in the Knowledge-Based Bio Economy (KBBE) between Europe and Australia, Canada, New Zealand and the United States. It builds upon two important, ongoing initiatives: the EU-US Task Force on biotechnology, and the International KBBE Forum, involving the EU, Australia, Canada and New Zealand. The planned activities include the organisation of: i) priority setting workshops and policy dialogue fora, ii) a multilateral roundtable to coordinate related initiatives, such as INCONETs and BILAT projects, iii) 'twinning' activities between projects in the EU and partner countries, including an online information exchange platform, iv) working visits of high-level researchers & summer schools for early-stage researchers, to and from the EU and partner countries. In addition, information will be disseminated through a website and promotion materials, and via related networks and initiatives. The expected impacts of BIO TRIANGLE are: strengthened cooperation amongst all partner countries, both at the policy-making and the researcher level; greater awareness amongst researchers of the possibilities, benefits and best-practices of bilateral and multilateral S&T cooperation; and increased exchange of knowledge and skills that support the further development of KBBE.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

1,499,929.00

PROJECT N°

289424

DURATION

36 months

PROJECT START DATE

December 2011

LIST OF PARTNERS

1. AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA (IT)
2. OESTERREICHISCHE FORSCHUNGSFOERDERUNGSGESELLSCHAFT MBH (AT)
3. KENTRO ANANEOSIMON PIGON KE EXIKONOMISIS ENERGEIAS (CENTRE FOR RENEWABLE ENERGY SOURCES AND SAVING) (EL)
4. TUDOMANYOS ES TECHNOLOGIAI ALAPITVANY (HU)

FP7-KBBE-2011-5

BIO TRIANGLE



Support to European Commission (EC) activities related to international co-operation with Australia-Canada-New Zealand and with the USA

<http://biotriangle.apre.it>



ACTIVITY 2.4

OTHER ACTIVITIES





ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

Activity 2.4 OTHER ACTIVITIES

AGREE

Agriculture and Energy Efficiency

Until now energy efficiency in agriculture has received little attention, except for energy use in greenhouses. Nevertheless, it is considerable, especially when indirect energy use is taken into account. AGREE has the objective of showing the potential of short term energy efficiency gains and the promise of the long term potential. Environmental effects of savings on direct and indirect energy use in agriculture are integrally considered, as energy use efficiency also implies reduction of greenhouse gas emissions. Because energy savings in agriculture depend highly on the agri-environment (climate), AGREE will bring together south-eastern, south-western, north-eastern and north-western agroproduction systems. Evidence from energy saving potential and corresponding environmental and economical effects on country level are brought to the transnational level to identify an agenda for transnational collaboration to increase the learning curve on energy use efficiency. AGREE will set up a participatory process for two reasons. 1. Stakeholders will be involved in the set-up of the agenda which will facilitate the implementation of the results. 2. AGREE needs the opinions and views of stakeholders to produce an agenda that reflects the needs of and opportunities by practice. To ensure implementation, a link has been created with a European network of researchers committed to adopt the issue. This network (ENGAGE) is closely associated with the European Society of Agricultural Engineers (EuAgEng). This link will facilitate the adoption process. To ensure that the results will create relevant and effective R&D programmes, AGREE has established a close link with the Collaborative Working Group on Agriculture and Energy. This group is embedded in SCAR and the KBBE-Net and is thus positioned to translate the AGREE agenda, into commitment for effective R&D on energy efficiency. To this end, it is important that AGREE provides evidence of the added value of such research.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

499,709.00

PROJECT N°

289139

DURATION

24 months

PROJECT START DATE

October 2011

LIST OF PARTNERS

1. FACHAGENTUR NACHWACHSENDE ROHSTOFFE E.V. (DE)
2. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
3. UNIWERSYTET WARMINSKO- MAZURSKI W OLSZTYNIE (PL)
4. AGRICULTURAL UNIVERSITY OF ATHENS (EL)
5. LEIBNIZ-INSTITUT FUER AGRARTECHNIK POTSDAM-BORNIM EV (ATB) (DE)
6. UNIVERSIDADE DE EVORA (PT)
7. HELSINGIN YLIOPISTO (FI)
8. AARHUS UNIVERSITET (DK)

FP7-KBBE-2011-5

Energy Efficiency in Agriculture

AGREE

www.agree.aua.gr



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

Activity 2.4 OTHER ACTIVITIES

ALCUE-KBBE



Towards a Latin America & Caribbean Knowledge Based Bio-Economy (KBBE) in partnership with Europe

The project objective is to establish a LAC-UE platform bringing together regional and continental organizations involved in research funding and implementation, as well as other relevant stakeholders from the public and private sector and the civil society, in an effort to generate relevant information for the design and implementation of specific plans and projects, included the needed R&D and set the basis for the establishments of an enabling policy and institutional environment, as well as, for the development and consolidation of the KBBE in both the regions. To achieve this aim the project activities are oriented to generate information relevant to KBBE related issues in LAC, to help establish a strategic reflection and analysis on KBBE opportunities and limitations in the region, to stimulate KBBE related research and development ALC-UE cooperation, and to insert the KBBE theme in ALC policy agendas.

The proposed structure to implement these activities include (i) a partner consortium of ALC and EU organizations directly involved in different aspects of R&D and implementation of KBBE concepts in both regions, which will assume the project's operational responsibilities, with the French CIRAD as consortium coordinator, and (ii) a broader array of stakeholders (institutions –public and private – playing key roles in different aspects of the KBBE: R&D, policy advice, advocacy, key sectors representation, etc.) which will participate as platform members in accordance to their interests and areas of expertise. This platform will constitute the cornerstone of the project and will be convened regularly during the project to analyze information and options, identify possible scenarios and R&D and policy agendas, and institutional and other issues that could emerge as the discussion evolves. (iii) strategic and macro guidance of the project will be the responsibility of a Steering Committee integrated by people from ALC and UE with recognized experience.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

995,314.00

PROJECT N°

264266

DURATION

30 months

PROJECT START DATE

June 2011

LIST OF PARTNERS

1. CENTRE DE COOPERATION INTERNATIONALE EN RECHERCHE AGRONOMIQUE POUR LE DEVELOPPEMENT (FR)
2. GRUPO CONSULTORES EN ECONOMIA Y ORGANIZACION SA (AR)
3. UNIVERSITEIT GENT (BE)
4. INSTITUTO DE BIOLOGIA EXPERIMENTAL E TECNOLOGICA (PT)
5. CENTRO DE INVESTIGACION Y DE ESTUDIOS AVANZADOS DEL INSTITUTO POLITECNICO NACIONAL (MX)
6. WAGENINGEN UNIVERSITEIT (NL)
7. CENTRO INTERNACIONAL DE AGRICULTURA TROPICAL (CO)
8. MINISTERIO DE CIENCIA, TECNOLOGÍA E INNOVACIÓN PRODUCTIVA (AR)
9. EMPRESA BRASILEIRA DE PESQUISA AGROPECUARIA (BR)
10. FORSCHUNGSZENTRUM JUELICH GMBH (DE)
11. PONTIFICIA UNIVERSIDAD JAVERIANA (CO)
12. INSTITUTO INTERAMERICANO DE COOPERACION INTERNACIONAL PARA LA AGRICULTURA IICA (CR)

FP7-KBBE-2010-4

ALCUE-KBBE

Towards a Latin America & Caribbean Knowledge Based Bio-Economy in partnership with Europe

<http://alcue-kbbe.eu/>



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

Activity 2.4 OTHER ACTIVITIES

BIO CIRCLE

Creating a CIRCLE by extending the BIO NCP network to Third Country NIPs

BIO CIRCLE will extend the network of National Contact Points for the FP7 theme “Food, Agriculture and Fisheries and Biotechnology” (BIO NCP) to National Information Points (NIP) from Third Countries over a two year period. The European Commission needs to implement the bilateral Scientific & Technological Agreements signed with Third Countries (TC), for increasing their participation in FAFB FP7 and strengthening the collaboration between European and TC researchers. The main focus of the project will be on identifying, sharing and implementing good practices between NCPs and NIPs. The expected results of BIO CIRCLE are: 1. Capacities built for Third Country BIO NIPs (through SWOT analysis, training of NIPs and twinning); 2. Strengthened consortium building in FAFB international cooperation projects (through mapping of Third Country research potential and the organisation of 2 international Brokerage Events); 3. Capacities built for Third Country Researchers to participate in FP7 (through preparation of specific training materials, training and networking with EU researchers); 4. Strengthened identification, development and sharing of Good Practices to enhance cooperation between the NCP and NIP networks (through 5 Regional Benchmarking Workshops, a Common Benchmarking Workshop and the design of a Good Practices Guide). The 6% of budget is foreseen to grant researchers from TCs to attend the 2 International Brokerage Events. The 5 BIO NCP partners of BIO CIRCLE led by APRE will assure the successful implementation of the project. The 18 NIPs partners of BIO CIRCLE will be embraced in this circle of activities aimed at ensuring quality and dynamism in implementing the Scientific & Technological Agreements between the EU and Third Countries. BIO CIRCLE will work in synergy with and be closely linked to the BIO-NET project, the complete NCP FAFB network.

PROJECT COORDINATOR

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FUNDING SCHEME CSA

EC CONTRIBUTION € 1,412,680.00

PROJECT N° 227204

DURATION 28 months

PROJECT START DATE

October 2008

LIST OF PARTNERS

1. AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA (IT)
2. ASSOCIATION DE COORDINATION TECHNIQUE POUR L'INDUSTRIE AGROALIMENTAIRE (FR)
3. FORSCHUNGSZENTRUM JUELICH GMBH (DE)
4. ANONYMI ETAREIA VIOMICHANIKIS EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS TIS VIOMICHANIAS TROFIMON - FOOD INDUSTRIAL RESEARCH AND TECHNOLOGICAL DEVELOPMENT COMPANY SA (EL)
5. TUDOMANYOS ES TECHNOLOGIAI ALAPITVANY (HU)
6. SENTERNOVEM (NL)
7. MINISTERIO DE CIENCIA, TECNOLOGÍA E INNOVACIÓN PRODUCTIVA (AR)
8. EMPRESA BRASILEIRA DE PESQUISA AGROPECUARIA (BR)
9. COMISION NACIONAL DE INVESTIGACION CIENTIFICA Y TECNOLÓGICA (CL)
10. CHINA NATIONAL CENTER FOR BIOTECHNOLOGY DEVELOPMENT (CN)
11. NATIONAL RESEARCH CENTER (EG)
12. FORUM FOR AGRICULTURAL RESEARCH IN AFRICA (UK)
13. JAWAHARLAL NEHRU UNIVERSITY (IN)
14. INDEPENDENT EXPERTS CONSULTING BOARD TO PROMOTE SCIENTIFIC RESEARCH ACTIVITY IN KAZAKHSTAN (KZ)
15. UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO (MX)
16. MINISTÈRE DE L'ÉDUCATION NATIONALE, DE L'ENSEIGNEMENT SUPÉRIEUR, DE LA FORMATION DES CADRES ET DE LA RECHERCHE SCIENTIFIQUE, DIRECTION DE LA TECHNOLOGIE (MA)
17. INSTITUTION OF THE RUSSIAN ACADEMY OF SCIENCES, A.N. BACH INSTITUTE OF BIOCHEMISTRY OF RAS (RU)
18. COUNCIL FOR SCIENTIFIC AND INDUSTRIAL RESEARCH (ZA)
19. CENTRE DE BIOTECHNOLOGIE BORJ CEDRIA (TN)
20. THAILAND NATIONAL SCIENCE AND TECHNOLOGY DEVELOPMENT AGENCY (TH)
21. NATIONAL UNIVERSITY OF LIFE AND ENVIRONMENTAL SCIENCES OF UKRAINE (UA)

FP7-KBBE-2008-2B

BIO CIRCLE



Network of Third Countries National Information Points – (ICPC and countries with bilateral S&T agreements with the EC)

<http://old.biocircle-project.eu/dnn4/>



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

Activity 2.4 OTHER ACTIVITIES

BIO CIRCLE 2



Reinforcing the international cooperation in FP7 FAFB strengthening the CIRCLE of Third Countries BIO NCPs

The main objective of BIO CIRCLE 2 is to foster the knowledge base about FP7 FAFB & the networking capacities of Third Country researchers in order to reinforce their participation in FP7 projects. 3 project goals are distinguished: 1. Disseminate information effectively to Third Country researchers; 2. Organise information days and training for Third Country researchers; 3. Provide Third Country researchers with efficient networking opportunities. 5 European plus 18 Third Country partners (International Cooperation Partner Countries ICPC and Industrialised Countries) will all be involved in the activities. Apart from Kazakhstan and Thailand all involved countries (and the African continent represented by FARA) have signed a bilateral S&T agreement with the EU. The expected impacts are supported by various activities: Enhanced awareness of the Third Country researchers on the FP7 FAFB: WP2 will develop the dissemination strategy at national & regional level in Third Countries. Increased Third Country researchers' participation in EU projects: WP3 will organise at least 2 trainings for Third Country researchers at national and regional level, 3 trainings of Third Country BIO NCPs and the organisation of 2 Regional Events per World Region. Strengthened collaborations with Third Countries signatories of bilateral S&T agreements with the EU: WP4 will implement networking activities for Third Country researchers, including brokerage events and working visits of Third Country researchers to EU research institutes and vice versa. Finally WP5 on dissemination activities will increase the awareness of European researchers about the international cooperation in FP7 FAFB. The impact of the activities will be further maximised by: 1. involving other countries that are not partners through a regional approach; 2. linking the BIO CIRCLE 2 activities to the activities of related INCO projects; 3. involving industrialised countries that are global S&T leaders in FAFB related research.

PROJECT COORDINATOR

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FUNDING SCHEME CSA

EC CONTRIBUTION € 999,969.00

PROJECT N° 265608

DURATION 24 months

PROJECT START DATE

February 2011

LIST OF PARTNERS

1. AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA (IT)
2. ASSOCIATION DE COORDINATION TECHNIQUE POUR L'INDUSTRIE AGROALIMENTAIRE (FR)
3. FORSCHUNGSZENTRUM JUELICH GMBH (DE)
4. TUDOMANYOS ES TECHNOLOGIAI ALAPITVANY (HU)
5. ANONYMI ETAREIA VIOMICHANIKIS EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS TIS VIOMICHANIAS TROFIMON - FOOD INDUSTRIAL RESEARCH AND TECHNOLOGICAL DEVELOPMENT COMPANY SA (EL)
6. MINISTERIO DE CIENCIA, TECNOLOGÍA E INNOVACIÓN PRODUCTIVA (AR)
7. EMPRESA BRASILEIRA DE PESQUISA AGROPECUARIA (BR)
8. AGRICULTURE AND AGRI-FOOD CANADA (CA)
9. COMISION NACIONAL DE INVESTIGACION CIENTIFICA Y TECNOLÓGICA (CL)
10. CHINESE ACADEMY OF AGRICULTURAL SCIENCES (CN)
11. NATIONAL RESEARCH CENTER (EG)
12. FORUM FOR AGRICULTURAL RESEARCH IN AFRICA (UK)
13. JAWAHARLAL NEHRU UNIVERSITY (IN)
14. INDEPENDENT EXPERTS CONSULTING BOARD TO PROMOTE SCIENTIFIC RESEARCH ACTIVITY IN KAZAKHSTAN (KZ)
15. UNIVERSIDAD NACIONAL AUTONOMA DE MEXICO (MX)
16. INSTITUT AGRONOMIQUE ET VETERINAIRE HASSAN II (MA)
17. EURO RESEARCH SUPPORT LIMITED (NZ)
18. INSTITUTION OF THE RUSSIAN ACADEMY OF SCIENCES, A.N. BACH INSTITUTE OF BIOCHEMISTRY OF RAS (RU)
19. DEPARTMENT OF SCIENCE AND TECHNOLOGY (ZA)
20. CENTRE DE BIOTECHNOLOGIE BORJ CEDRIA (TN)
21. NATIONAL UNIVERSITY OF LIFE AND ENVIRONMENTAL SCIENCES OF UKRAINE (UA)
22. ENIEOS FOREAS ELEGHOU TROFINON (EL)

FP7-KBBE-2010-4

Network of Third Countries bio NCPs

BIO CIRCLE 2

www.biocircle-project.eu





ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

Activity 2.4 OTHER ACTIVITIES

BIO-NET

A Network of National Contact Points providing cutting-edge NCP services to the Knowledge Based Bio-Economy research community

The BIO-NET coordination and support action will provide cutting-edge NCP services to the Knowledge Based Bio Economy research community. Its aim is to reinforce the network of all European organisations that are active as NCPs in Theme 2.

BIO-NET will improve the services of Bio NCPs through training and the use of common tools. Based on a thorough SWOT analysis, learning needs will be fulfilled by training sessions and online training material. The Knowledge within the network shall be preserved in an innovative Wikipedia-style environment.

It will improve the cohesion of the NCP network by organising common activities, providing a platform for the exchange of skills and experience.

Especially for SMEs and newcomers, BIO-NET will simplify access to FP7 by lowering the entry barriers. Efficient partner search tools will provide high quality matching opportunities, improving the overall quality of proposals in Theme 2.

As a result of the large number of organisations involved, BIO-NET is set up as an open network. Each work package of the network has a core group or Task Force of contractors and third parties, working together to achieve the goals. Great care is taken to ensure that all officially appointed NCPs will benefit from the network, its facilities and activities, while at the same time avoiding the creation of a hard to manage consortium with 54 partners. All NCPs have been involved in the creation of the network from the very early beginning. The structure of BIO-NET is set up in such a way that they will continue to be involved throughout the life span of the project, even though not all NCPs will become contractors.

The activities to be performed by the BIO-NET are selected on the sound principle that only those things will be done together that will have little or no effect when performed on a national scale. In this way the European Added Value is guaranteed for all BIO-NET activities.

BIO-NET will run for four years.

PROJECT COORDINATOR

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FUNDING SCHEME CSA

EC CONTRIBUTION € 2,193,579.00

PROJECT N° 211363

DURATION 48 months

PROJECT START DATE

September 2008

LIST OF PARTNERS

1. MINISTERIE VAN ECONOMISCHE ZAKEN, LANDBOUW EN INNOVATIE (NL)
2. OESTERREICHISCHE FORSCHUNGSFOERDERUNGSGESELLSCHAFT MBH (AT)
3. AGENZIA PER LA PROMOZIONE DELLA RICERCA EUROPEA (IT)
4. INSTITUT NATIONALE DE LA RECHERCHE AGRONOMIQUE INRA (FR)
5. INSTYTUT PODSTAWOWYCH PROBLEMOW TECHNIKI POLSKIEJ AKADEMII NAUK (PL)
6. CENTRO PARA EL DESARROLLO TECNOLÓGICO INDUSTRIAL (ES)
7. MATIMOP, ISRAELI INDUSTRY CENTER FOR RESEARCH & DEVELOPMENT (IL)
8. AGENCE BRUXELLOISE POUR L'ENTREPRISE (BE)
9. TECHNOLOGICKE CENTRUM AKADEMIE VED CESKE REPUBLIKY (CZ)
10. VEREIN EURESEARCH (CH)
11. VERKET FOR INNOVATIONSSYSTEM (SE)
12. NEMZETI KUTATASI ES TECHNOLOGIAI HIVATAL (HU)
13. FORSCHUNGSZENTRUM JUELICH GMBH (DE)
14. BETA TECHNOLOGY LTD (UK)
15. INSTITUTUL NATIONAL DE CERCETARE-DEZVOLTARE PENTRU BIORESURSE ALIMENTARE (RO)
16. MARIA TSAMPOULA KAI SIA EE (EL)
17. OFFICE OF THE PRIME MINISTER (MT)
18. THE ICELANDIC CENTRE FOR RESEARCH (IS)
19. UNIVERSITY OF PLOVDIV (BG)
20. HRVATSKI INSTITUT ZA TEHNOLOGIJU (HR)
21. AGENCIA DE INOVACAO - INOVACAO EMPRESARIAL E TRANSFERENCIA DE TECNOLOGIA (PT)
22. LATVIJAS ZINATNES PADOME (LV)
23. TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU (TR)
24. SIHTASUTUS ARCHIMEDES (EE)
25. INSTITUTO NACIONAL DE INVESTIGACION Y TECNOLOGIA AGRARIA Y ALIMENTARIA (ES)
26. FUNDACAO PARA A CIENCIA E A TECNOLOGIA (PT)

FP7-KBBE-2007-1

National Contact Point Network

BIO-NET

www.ncp-bio.net



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

Activity 2.4 OTHER ACTIVITIES

BIOPROM



Promotion of the Bio-Economy through a travelling exhibition in Europe

The BIOPROM project consortium proposes a Co-ordination and Support Action (Supporting) for bringing together experts who work with and on new concepts for communicating KBBE science to the public. One of these concepts is to address the interests and concerns of citizens through interactive exhibitions in association with science concepts with citizens' debates and participative democracy tools. Especially, the research topic of climate change and primary production is discussed very much these days in the public and therefore needs more involvement of the public into the development of science and research and especially implementation of concepts to reduce greenhouse gas emissions. Within the bio-economy several topics are addressed with one main goal for a "zero waste" society addressed across all activities. In many European countries initiatives have been started in setting up science centres, science museums and in organising national or regional events. The BIOPROM project will combine different experiences and know-how in order to develop synergetic support measures with the main goal to promote Bio-Economy in the regions.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

993,038.00

PROJECT N°

289647

DURATION

40 months

PROJECT START DATE

October 2011

LIST OF PARTNERS

1. DI ANDREAS MOSER RTD SERVICES -RTDS (AT)
2. WELIOS BETRIEBS GMBH (AT)
3. KURT HUTTINGER GMBH & CO KG (DE)
4. MUSEO DEI BAMBINI SOCIETA COOPERATIVA SOCIALE ONLUS (IT)
5. SIHTASUTUS TALLINNA TEHNIKA- JA TEADUSKESKUS (EE)
6. FH 00 FORSCHUNGS & ENTWICKLUNGS GMBH (AT)
7. SATROSPHERE SCIENCE CENTRE (UK)
8. THE UNIVERSITY COURT OF THE UNIVERSITY OF ABERDEEN (UK)

FP7-KBBE-2011-5

Bio-Economy Promotion

BIOPROM

www.bioprom.net



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

Activity 2.4 OTHER ACTIVITIES

COMMFABNET

Communication of Food, Fisheries, Agriculture and Biotechnologies research – a network to support EU-funded research projects

The effective communication of research results of EC funded research projects to end users is hampered by a number of factors including

- Lack of confidence and communication skills within the scientific community
- Inherent difficulties in effectively reaching out to the media and other multipliers with research results

Poor dissemination of research results significantly reduces the potential project impact on European competitiveness and the quality of life of EU citizens.

CommFABnet addresses these challenges in the FP6 Food Quality and Safety and FP7 KBBE programmes with an innovative range of activities to

- establish a large network of communication managers
- identify and exchange best practice in the communication of research results to target groups
- provide training to scientists in communicating research results
- address target audiences including the general public, SMEs, policy makers and young people

CommFABnet comprises a consortium of organisations expert in the effective communication and dissemination of research results who demonstrate essential complementarity in successfully reaching different target groups. CommFABnet is led by Karolinska Institutet who has initiated and maintained the informal CommNet network of communication managers in the food safety research since 2006.

This highly relevant experience will be fully exploited in the design and implementation of CommFABnet's activities.

CommFABnet will increase and channel the information flow from research projects towards the target groups. The exchange of best practice and training events for the CommFABnet network of communication officers and managers will result in a European community of communication managers highly proficient in the effective communication of research results to a range of target groups and other stakeholders. The result will be a significantly enhanced impact of the research results on European competitiveness and on the quality of life of EU citizens.

FP7-KBBE-2011-5

Communication of research results

COMMFABNET

<http://commnet.eu>



PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

1,999,375.00

PROJECT N°

289699

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. YOURIS.COM (BE)
2. MINERVA HEALTH & CARE COMMUNICATIONS LTD (UK)
3. BRITISH NUTRITION FOUNDATION (UK)
4. PRACSIS SPRL (BE)
5. VEREIN ZUR FOERDERUNG DES TECHNOLOGIETRANSFERS AN DER HOCHSCHULE BREMERHAVEN E.V. (DE)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

Activity 2.4 OTHER ACTIVITIES

EADGENE_S



Strengthening the implementation of durable integration of EADGENE

By integrating the key European teams in genomics, bioinformatics, animal health and animal models, EADGENE has enabled:

- the gathering of a critical mass of scientists and a unique access of complementary resources across host and pathogen models
- the development of innovative functional genomics so that it has become a powerful tool in veterinary molecular medicine and has contributed to a better understanding of host-pathogen interactions, for the improvement of animal health and food safety,

Building from these benefits, EADGENE_S will ensure a long-term integration of the European resources in animal disease genomics grouping together the leading institutions. It will strengthen durably the creation of a core group of European research centres of excellence highly committed to integrating their resources and national facilities. To achieve this, EADGENE_S will:

- (1) Expend, share and upgrade common research tools and platforms for joint research projects
- (2) Further develop common research methods, standards and protocols
- (3) Maintain, consolidate and further develop high quality common research projects on animal genomics and genetics in Europe
- (4) Support strategies for durable integration, particularly by providing opportunities for further funding
- (5) Consolidate the skills and expertise throughout the partnership with a programme of workshops, training courses, short-term missions, internships and studentships
- (6) Provide platforms for the development, management and dissemination of knowledge
- (7) Ensure efficient technology transfer to the industry to ensure timely commercialisation newest developments

This integration will be fulfilled under the framework of the European Research Group EADGENE (EADGENE ERG), a co-operation instrument composed of the EADGENE members as represented by their respective participating research departments.

FP7-KBBE-2010-4

EADGENE_S



Strengthening the implementation of durable integration in FP6 Networks of Excellence

www.eadgene.info/AboutEADGENE_SERG



PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,810.00

PROJECT N°

265663

DURATION

24 months

PROJECT START DATE

June 2011

LIST OF PARTNERS

1. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
2. WAGENINGEN UNIVERSITEIT (NL)
3. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
4. THE INSTITUTE FOR ANIMAL HEALTH (UK)
5. THE UNIVERSITY OF EDINBURGH (UK)
6. AARHUS UNIVERSITET (DK)
7. UNIVERSITE DE LIEGE (BE)
8. UNIVERZA V LJUBLJANI (SI)
9. UNIVERSIDAD DE CORDOBA (ES)
10. NORGES VETERINAERHOGSKOLE (NO)
11. LEIBNIZ-INSTITUT FUR NUTZTIERBIOLOGIE (DE)
12. PARCO TECNOLOGICO PADANO S.R.L. (IT)
13. EUROPEAN FORUM OF FARM ANIMAL BREEDERS (NL)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

Activity 2.4 OTHER ACTIVITIES

ECNIS2



ECNIS2: towards ECNIS Centre for Research and Education on Cancer, Environment and Food

ECNIS2 aims at continuing the integrative and coordinative work initiated during the ECNIS Network of Excellence with the ultimate goal of transforming the network into a virtual centre, the European Centre for Research and Education on Cancer, Environment and Food (ECRECEF).

ECNIS has already laid foundations for the development of the centre by bringing together researchers from different disciplines (epidemiology, chemical analysis, genetics, molecular biology, nutrition, exposure assessment, risk assessment, harmonisation and standardisation of methodologies and analytical techniques). The initiatives undertaken within ECNIS will be continued during ECNIS2 and will focus on the main pillars, so called "ECNIS added values" including: Molecular Epidemiology and Cancer" (MEC) database, Core facilities for: standardized chemicals, antibodies and analytical methodology, European Standards Committee on Urinary DNA Lesion Analysis (ESCUA), and European Comet Assay Validation Group (ECVAG), ECNIS Repository, and Training and educational program. The works of as many as 21 ECNIS2 partner institutions from 13 countries (incl. 4 SMEs) will be organized within the framework of nine workpackages, five Infrastructural (WP1-ECNIS Centre establishment; WP2-Validation and Standardization; WP3-MEC database; WP4-Spreading of Knowledge; WP5-Education and training), three Thematic (WP6-Biomarkers use for cancer prevention; WP7-Dietary exposure and cancer risk as modified by genetic polymorphisms; WP8-Ethics, Communication and Gender) and Managerial-WP9.

Research coordination, education and dissemination will be key outputs, together with the formulation of strategy for transformation of ECNIS into the Centre (ECRECEF).

ECNIS2 will facilitate the transformation of a dynamic European consortium into a durable structure of the co-ordinating centre.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

1,000,000.00

PROJECT N°

266198

DURATION

24 months

PROJECT START DATE

June 2011

LIST OF PARTNERS

1. INSTYTUT MEDYCYNY PRACY NOFERA (PL)
2. KØBENHAVNS UNIVERSITET (DK)
3. KAROLINSKA INSTITUTET (SE)
4. ETHNIKO IDRYMA EREVNON (EL)
5. UNIVERSITY OF LEICESTER (UK)
6. ORSZAGOS KORNYEZETEGESZSEGUGYI INTEZET (HU)
7. UNIWERSYTET MIKOLAJA KOPERNIKA W TORUNIU (PL)
8. GENETICS RESEARCH INSTITUTE - ONLUS ASSOCIAZIONE (IT)
9. TYOETERVEYSLAITOS (FI)
10. SKANE LANS LANDSTING (SE)
11. KATHOLIEKE UNIVERSITEIT LEUVEN (BE)
12. INSTITUTE OF CANCER RESEARCH - ROYAL CANCER HOSPITAL (UK)
13. UNIVERSITEIT MAASTRICHT (NL)
14. BIOCHEMISCHES INSTITUT FÜR UMWELTCARCINOGENE PROF. DR. GERNOT GRIMMER STIFTUNG (DE)
15. UNIVERSITEIT UTRECHT (NL)
16. NETIX SKRZYPCZYNSKI, KRZYSZTOFOWICZ SP.J. (PL)
17. LEOCORDIA AB (SE)
18. IMPERIAL COLLEGE OF SCIENCE, TECHNOLOGY AND MEDICINE (UK)
19. INTERNATIONAL PREVENTION RESEARCH INSTITUT-IPRI MANAGEMENT (FR)
20. UNIVERSITA DEGLI STUDI DI TORINO (IT)
21. CENTRE INTERNATIONAL DE RECHERCHE SUR LE CANCER (FR)
22. KING'S COLLEGE LONDON (UK)

FP7-KBBE-2010-4

ECNIS2



Strengthening the implementation of durable integration in FP6 Networks of Excellence

www.ecnis.org



ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

Activity 2.4 OTHER ACTIVITIES

EUROFIR-NEXUS



The EuroFIR Food Platform: Further integration, refinement and exploitation for its long-term self-sustainability

The objective is to further integrate/refine the EuroFIR Food Platform (EFP), to improve/support the ways research is undertaken into relationships between food, diets and health in Europe. Our focus is on extending application and exploitation of validated food data and tools for pan-European nutrition studies and networked usage, implementation of standards and best practice. This together forms the basis of long-term sustainability through the newly established legal entity EuroFIR AISBL. Six Work Packages are included: Quality standards & certification; Systems integration & operational support; Integration & business development; Training; Dissemination & Management. The revised consortium has 35 existing EuroFIR partners (18 as 3rd parties/EuroFIR AISBL members). The already achieved high-level institutional commitment will be further strengthened. The new General Assembly consists of executive representatives of all beneficiaries (who are also AISBL Members), thus real and durable integration is achievable. The Executive Board will work closely with EuroFIR AISBL to provide an integrated approach to joint activities and stakeholder engagements. A high-level External Advisory Board of key users/stakeholders from Europe and internationally will ensure that food data, other products and services are fine-tuned to stakeholders needs, keeping Europe at the forefront of leadership and innovation in this area. Outputs are consistent with the ETP 'Food for Life' and will further support Theme 2 (FP7) in food and nutrition research contributing to the structuring of the European Research Area and world-class scientific/technological excellence. Additionally, the outputs bring the EFP in alignment with the current European CEN Standard on Food Data and its application.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

999,998.00

PROJECT N°

265967

DURATION

24 months

PROJECT START DATE

April 2011

LIST OF PARTNERS

1. INSTITUTE OF FOOD RESEARCH (UK)
2. EUROPEAN FOOD INFORMATION RESSOURCE AISBL (BE)
3. FOODCON SPRL (BE)
4. UNIVERSITY COLLEGE CORK, NATIONAL UNIVERSITY OF IRELAND, CORK (IE)
5. WAGENINGEN UNIVERSITEIT (NL)
6. BRITISH NUTRITION FOUNDATION (UK)
7. DANISH FOOD INFORMATION (DK)
8. EIDGENÖSSISCHE TECHNISCHE HOCHSCHULE ZÜRICH (CH)
9. DANMARKS TEKNISKE UNIVERSITET (DK)
10. LIVSMEDELS VERKET (SE)
11. INSTITUT ZA MEDICINSKA ISTRA IVANJA (RS)
12. SVERIGES LANTBRUKSUNIVERSITET (SE)
13. VYSKUMNY USTAV POTRAVINARSKY (SK)
14. AGENCE NATIONALE DE SECURITE SANITAIRE DE L'ALIMENTATION, DE L'ENVIRONNEMENT ET DU TRAVAIL (FR)
15. INSTITUTO NACIONAL DE SAUDE DR. RICARDO JORGE (PT)
16. TERVEYDEN JA HYVINVOINNIN LAITOS (FI)
17. ISTITUTO NAZIONALE DI RICERCA PER GLI ALIMENTI E LA NUTRIZIONE (IT)
18. CENTRE INTERNATIONAL DE RECHERCHE SUR LE CANCER (FR)
19. TOPSHARE INTERNATIONAL B.V. (NL)

FP7-KBBE-2010-4

EUROFIR-NEXUS



Strengthening the implementation of durable integration in FP6 Networks of Excellence

www.eurofir.org/eurofir_aisbl/projects/eurofir_nexus





ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

Activity 2.4 OTHER ACTIVITIES

INSARD

Including Smallholders in Agricultural Research for Development

There is an increasing call to reform research approaches in which organizations specialized in generating new technology operate in isolation from small farmer realities, knowledge, contexts and dynamics. An innovation system perspective on ARD is needed in which farmers and their organizations are not mere recipients of knowledge but potential partners in its generation.

There is wide agreement that in the process of reorienting ARD institutions the input and involvement of CSOs is vital. Despite recent efforts to involve CSOs, flaws related to their selection, representation, capacities, coordination and communication remain.

The main aim of this project is to facilitate the participation of a broader range of European and African civil society organizations in the formulation and implementation of ARD.

It will do so by:

1. Designing a structure for coordination and communication between European and African CSO's involved in influencing policies and practices around ARD.
2. Define policy influencing strategies, including thematic priorities, target groups/ individuals and tools.
3. Lobby key African and European research organizations and donors.
4. Working towards defining research priorities which draw on interaction between researchers and CSOs.

To coordinating CSO inputs into the ARD agenda, the project will establish mechanisms for coordination and communication in WP1. Through a series of meetings and consultations, employing the agreed structure, partners will facilitate the process of developing a clear policy influencing strategy in WP2.

During the implementation of WP3 this strategy is put in place: CSO players attend meetings, interact with parliamentarians, and write policy briefs. Finally, under WP4, farmers' own research priorities will be further developed into research outlines.

It is central proposition of this project that the above objectives can best be achieved by building on existing initiatives, networks and fora.

FP7-AFRICA-2010

INSARD



Networking of non-governmental organisations involved in agricultural research for development

www.repaoc.org/insard



PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

498,330.00

PROJECT N°

266002

DURATION

36 months

PROJECT START DATE

January 2011

LIST OF PARTNERS

1. STICHTING ETC (NL)
2. THE EASTERN AND SOUTHERN AFRICA SMALL SCALE FARMERS' FORUM ASSOCIATION (TZ)
3. GROUPE DE RECHERCHE ET D'ECHANGES TECHNOLOGIQUES (FR)
4. PARTICIPATORY ECOLOGY LAND USE MANAGEMENT (ZM)
5. PRACTICAL ACTION (UK)
6. RESEAU DES PLATES FORMES D'ONG D'AFRIQUE DE L'OUEST ET DU CENTRE REPAOC (SN)

ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

Activity 2.4 OTHER ACTIVITIES

PLATFORM



Platform of Knowledge Based Bio-Economy relevant ERA-NETs

PLATFORM will bring together the European Research Area Networks (ERA-NETs) from FP6 and FP7 in the area of the Knowledge Based Bio-Economy (KBBE) with the aim to improve exchange and cooperation between ERA-NETs and strengthen their contribution to, and impact on, the European Research Area in the Knowledge Based Bio-Economy.

Experienced ERA-NET coordinators and managers propose to establish a network that will increase synergies and thus contribute to their effectiveness and impact. The project will not only benefit the coordinators of the ERA-NETs, but all participants, as well as other KBBE actors such as Joint Programming Initiatives (JPI) in this area, SCAR and KBBE-NET Collaborative Working Groups.

The project will establish a networking platform with a mutual learning dimension and a strategic dimension.

Customized and effective learning will be facilitated by creating an open and inclusive learning environment, through Workshops and a moderated cyber forum and by building on results of ERA-LEARN. PLATFORM will thus make available an extensive body of knowledge to help individual initiatives run their activities more effectively and to support new initiatives throughout their development. PLATFORM will further foster a more effective and harmonized environment for the ERA-NET users and provide guidance based on good practices.

PLATFORM will address issues of overarching strategic importance, such as the identity and role of ERA-NETs, the synergy between national, intergovernmental and European research programming, and modalities for collaboration. PLATFORM will deliver a Vision Paper and Roadmap for long-term cooperation and synergy among ERA-NETs, and between ERA-NETs and other research policy actors such as JPIs, SCAR, and KBBE Technology Platforms. PLATFORM will contribute to a common strategic framework for EU research and innovation policy.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

499,424.00

PROJECT N°

288422

DURATION

36 months

PROJECT START DATE

January 2012

LIST OF PARTNERS

1. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
2. MINISTERIE VAN ECONOMISCHE ZAKEN, LANDBOUW EN INNOVATIE (NL)
3. FACHAGENTUR NACHWACHSENDE ROHSTOFFE E.V. (DE)
4. INSTITUT NATIONAL DE LA RECHERCHE AGRONOMIQUE (FR)
5. FONDATION FRANCAISE POUR LA RECHERCHE SUR LA BIODIVERSITE (FR)
6. THE SECRETARY OF STATE FOR ENVIRONMENT, FOOD AND RURAL AFFAIRS (UK)
7. BIOTECHNOLOGY AND BIOLOGICAL SCIENCES RESEARCH COUNCIL (UK)
8. FORSCHUNGSZENTRUM JUELICH GMBH (DE)
9. BUNDESMINISTERIUM FUER WIRTSCHAFT, FAMILIE UND JUGEND (AT)
10. FORSKNINGS- OG INNOVATIONSSTYRELSEN (DK)
11. AARHUS UNIVERSITET (DK)
12. NORDISK INNOVATIONSCENTER (NO)
13. TEKES-TEKNOLOGIAN JA INNOVAATIOIDEN KEHITTAEMISKESKUS (FI)

FP7-KBBE-2011-5

Networking of KBBE relevant ERA-NETs

PLATFORM

www.era-platform.eu





ACTIVITY 2.1 - SUSTAINABLE PRODUCTION

Activity 2.4 OTHER ACTIVITIES

SAHYOG

Strengthening networking on BiomAss research and biowaste conversion – biotechnology for Europe India integration

The main objective of the SAHYOG project is to establish a partnering initiative to coordinate research activities carried out in Europe and India on biomass production and biowaste conversion through biotechnological approaches. The integrated project activities will be carried out by a partnership of stakeholders from EU and India involving public and private organizations that conceive and fund research programmes as well as representatives from the scientific community. Strong EU-India linkages will be created between on-going and future research and innovation projects with the aim to exploit cooperation synergies for sustainable development.

PROJECT COORDINATOR

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FUNDING SCHEME

CSA

EC CONTRIBUTION €

996,095.00

PROJECT N°

289615

DURATION

36 months

PROJECT START DATE

December 2011

LIST OF PARTNERS

1. AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE, L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE (IT)
2. MINISTERIE VAN ECONOMISCHE ZAKEN, LANDBOUW EN INNOVATIE (NL)
3. DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV (DE)
4. STICHTING DIENST LANDBOUWKUNDIG ONDERZOEK (NL)
5. VLAAMSE INSTELLING VOOR TECHNOLOGISCH ONDERZOEK N.V. (BE)
6. WIRTSCHAFT UND INFRASTRUKTUR GMBH & CO PLANUNGS KG (DE)
7. NATIONAL TECHNICAL UNIVERSITY OF ATHENS (EL)
8. THE ENERGY AND RESOURCES INSTITUTE (IN)
9. COUNCIL OF SCIENTIFIC AND INDUSTRIAL RESEARCH (IN)
10. GOVIND BALLABH PANT KRISHI EVAM PRODYOGIK VISHWAVIDYALYA (IN)
11. TEZPUR UNIVERSITY (IN)
12. APPROPRIATE RURAL TECHNOLOGY INSTITUTE (IN)
13. JAWAHARLAL NEHRU UNIVERSITY (IN)

FP7-KBBE-2011-5

SAHYOG



EU – India Partnering Initiative on biomass production and bio waste conversion through biotechnological approaches – Mandatory India

www.sahyog-europa-india.eu



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Project information

