

EUROCORES Scheme

About EUROCORES



Welcome to the EUROCORES Scheme brochure. The Scheme was developed to engage the European science in recognised scientific problems through larger scale collaborative research programmes. How do we do this you might ask? We offer a framework which is flexible and where researchers from Europe and sometimes further afield, for example, the US and Canada, can work together. This means researchers in a specific topic are able to collaborate, independent of their country of origin.

We cover all areas of science and we are unique in offering an efficient mechanism for multinational pan-European collaboration. We feel that providing an arch between scientific disciplines as well as countries is the only way to further strengthen European research.

For national research funding or performing agencies, the attraction of the EUROCORES Scheme is the possibility to support trans-national research projects involving several partners by synchronising funding decisions. The high quality international peer review operated by ESF, which is the basis for the national funding decisions, creates a quality benchmark for national research projects. ESF is committed to working with its Member Organisations and other interested funding organisations in Europe and beyond to further develop the EUROCORES Scheme into a flexible and efficient tool for research collaboration in Europe.

Best regards,

Dr John Marks ESF Chief Executive



Dr Svenje Mehlert EUROCORES Scheme Coordinator



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What is EUROCORES?

The EUROCORES (European Collaborative Research) Scheme is a unique framework offered by the European Science Foundation (ESF) to promote collaborative research, networking and dissemination while targeting broad and complex topics of research across all scientific domains at the European level and in a global context. EUROCORES is not part of FP7 although the current funding for coordination and networking is provided by a contract in the Framework Programme 6. The research funding comes from a national funding organisations, but the thrusts are not nationally or strategically driven but rather researcher lead and in consultation with the participating funding organisations. We are working to promote and stimulate European collaborative research which is of the highest quality, innovative and investigator driven, in and across all scientific areas.

EUROCORES enables researchers to work in joint research projects with colleagues in other European countries and beyond, whilst the funding remains national. The EUROCORES Programmes within the scheme address research questions which require cooperation crossing national borders and disciplinary boundaries. The high quality international peer review operated by the ESF, which is the basis for the national funding decisions, creates a quality bench mark for national research projects.



For more detailed information about the EUROCORES Scheme, see www.esf.org/eurocores

Why EUROCORES?

EUROCORES offers a difference

EUROCORES is unique because it enables national research funding and research performing organisations as well as ministries to come together and fund innovative scientific projects. In fact, funding is not just provided on a European level but can also come from organisations outside Europe. In addition to this unique funding opportunity, EUROCORES offers added value through strong science management where scientific synergy is achieved through active and targeted networking. Programme monitoring includes mid-term and final evaluation of the collaborative research projects and of the programme as a whole.

The facts

- In 2007, we received 33 theme proposals (47 in 2006, and 53 in 2005)
- Of the 33 theme proposals received, six themes were selected to be developed into programmes
- In reply to the Call for outline proposals in 2006, for the six new Programmes almost

150 Collaborative Research Projects representing more than 1000 scientists were received

- A EUROCORES programme generally attracts over 100 interested scientists.
- Around 5-10 collaborative research projects are usually selected from 30-80 proposals.

EUROCORES adds value to European research by:

- Tackling scientific questions requiring an integrated European or even global effort.
- Creating efficiency by avoiding unnecessary duplication of national research efforts.
- Serving as a powerful tool to boost high class research at the European level by combining top-level research with network activities.

Scientific coordination and research funding

Until the end of 2008, coordination and networking by the European Science Foundation are covered through • Eliminating barriers for scientists who want to work together in international teams across borders by enabling them to apply for funding and perform research together.

the EC FP6 Programme, under contract no. ERAS-CT-2003-980409.

currently bring together over 100 Million

Euros for research funding from 50 different

funding agencies in Europe, US and Canada.

Progress

So far, more than 5500 scientists have submitted proposals and out of these, more than 860 have been funded. The 23 active EUROCORES Programmes

Who can apply?

Proposals for the selection of new ideas (EUROCORES themes) can come from the scientific community at large, from ESF Member Organisations or may arise from other ESF activities such as Forward Looks and Exploratory Workshops. The annual Call for EUROCORES themes is usually opened in early spring with a deadline in the beginning of June.

In a second step, proposals for Collaborative Research Projects can be submitted to Open Calls for outline proposals within each EUROCORES Programme. These can be made by project leaders who are responsible for overseeing the Collaborative Research Proposal. Such applications should include researchers from at least three countries which are supporting the EUROCORES Programme through national funding.

EUROCORES: The Revised Scheme (2008) - An Overview *



CRP – Collaborative Research Project EPA – EUROCORES Programme Administrator EPC – EUROCORES Programme Coordinator (Science Officer) FP – Full Proposal EPA – EUROCORES Programme Administrator MC – Management Committee SAB – ESF Science Advisory Board

*Note: This is the standard EUROCORES process, single EUROCORES Programmes might divert from this timeline.

EUROCORES: a detailed description





- + EUROCORES offers a difference
- + Tackling scientific questions requires an integrated European or even global effort
- + Eliminating barriers for scientists
- + Offers added value through strong science management
- + Promoting collaborative research of the highest quality, innovative and investigator driven, in and across all scientific areas
- + Providing high quality international peer review operated by the ESF

There are already 30 EUROCORES Programmes where ESF is coordinating and promoting crossdisciplinary collaboration and scientific progress and EUROCORES have just launched the development of another six programmes. The topics of the EUROCORES Programmes range from deep sea biodiversity, studying consciousness as both a cultural and a biological phenomenon, tackling the problem of nuclear organisation in relation to the control of gene expression and the study of cold quantum matter. The research undertaken by the scientists involved in these programmes has been recognised through awards such as the prestigious EURYI Award, the Verdansky Medal and many more. Publications include front covers in both Science and Nature. The topics for EUROCORES Programmes are chosen because of the scientific need and added value of collaboration.

EUROCORES offers a diverse array of networking opportunities to the programme communities all year round; providing a platform to stimulate new research initiatives and to foster synergy with other national and European initiatives.

New Themes in 2007

- EuroMEMBRANE: How cells shape and utilize their membranes
- EuroVOC4: Biogenic Volatile Organic Compounds in the Carbon Cycle Climate System: Present, Past and Future Projections
- EuroHESC: Higher Education and Social Change
- EuroHEART: A study of the interaction of genetic and lifestyle factors on the incidence of coronary heart disease
- EuroBABEL: Better Analysis Based on Endangered Languages
- EuroNANOCHEM: Chemical Control at the Nanoscale



Development of a Stem Cell Tool Box (EuroSTELLS)

Stem cell-based approaches are currently being developed to repair or regenerate damaged tissues and to treat severe diseases such as diabetes, chronic heart failure, stroke, spinal cord injuries and other degenerative disorders. However, much remains to be learned and many technical obstacles must be overcome before the therapeutic potential of stem cells can be fully realised. Recognising the importance of promoting and investing in stem cell research in Europe, the European Science Foundation launched the EUROCORES programme "Development of a Stem Cell Tool Box" (EuroSTELLS) in 2006. With twentyone research groups from eleven European countries, this programme aims at generating fundamental knowledge on stem cell biology, setting up the bases for comparative analyses of stem cells of different origins, and exploring their future clinical application. The ability to isolate, culture and manipulate stem cells ex vivo is a critical step towards elucidating their biological properties and developing their biotechnological and therapeutic potential. EuroSTELLS promotes and

supports networking activities, contributing to create a critical mass of expertise in the stem cell field in Europe. The conference on "General Biology of Stem Cell Systems" held in Venice on 19-21 March 2006 fostered innovative and multidisciplinary collaborations as well as synergy with other European and international stem cell initiatives. Training activities, including workshops and summer schools, allow harmonisation of research tools, definitions and protocols in stem cell biology and increase quality assurance. The most recent workshop, "Challenges in Stem Cell Differentiation and Transplantation" was held in Milan on 30 September – 3 October 2007. Attended by over 80 participants with world-renowned researchers in the field of stem cell research, this workshop also focused on the practical hurdles that need to be overcome for the therapeutic application of stem cells. Dissemination of EuroSTELLS activities, including a discussion of developments in the stem cell field and their impact on quality of life and public health, has generated wide media impact, including coverage on numerous international websites.



Lazzari G et al. Stem Cells 2006. Nov ; 24(11) 2514-21.



Medical Sciences (EMRC)

Pan-European Clinical Trials (ECT)

Pan-European Clinical Trials is a unique programme that coordinates funding for pan-European noncommercial, investigator-driven clinical trials addressing questions that have a strong impact on the quality of life, morbidity and mortality of the European population. The ECT programme provides a framework for the implementation of pan-European clinical trials in compliance with current National legislation and European regulations. Two pan-European clinical trials aimed at rare diseases and the paediatric population are funded under this programme. The first is EURAMOS, a randomised trial of the European and American Osteosarcoma Group to optimise treatment strategies for respectable osteosarcoma based on histological response to pre-operative chemotherapy that involves 150 clinical centres in 11 European countries, U.S. and Canada. EURAMOS is recruiting 1,400 patients over the next few years and has already recruited more patients than any previous ostersarcoma trial performed. The second trial is PROFIDYS, a trial aimed at reducing bone morbidity using an oral biphosphonate in fibrous

dysplasia that involves clinical centres in five European countries. As this disease is so rare, approximately 160 patients are being recruited for this trial. By promoting and supporting networking, the ECT programme fosters synergy with other European and international initiatives. Training activities have contributed to the development of the necessary expertise for the implementation and management of multi-centre, pan-European academic clinical trials, ensuring patient safety in compliance with Good Clinical Practice and current National and European legislation. Activities for 2008 include a Clinical Trials Training Course in London on 24-26 January. Dissemination activities have brought together clinicians, ethicists, legal experts, policy makers, charities and funding bodies, representatives from regulatory agencies, professional associations and patient organisations to discuss current regulatory and ethical issues to ensure patient safety in the conduct of academic clinical trials. The impact of these activities is evidenced by the wide coverage in the media and specialised publications.



Euramos: Osteosarcoma of the left knee visualized by Magnetic Resonance Imaging (MRI), and histological section' (courtesy of Prof. Stefan Bielack)



Profidys: Fibrous dysplasia of the femur before and after a 4-years bisphophonates treatment, and histological section' (courtesy Prof. Philippe Orcel and Dr. Alain Quillard)

More information: www.esf.org/ect or contact Carole Moquin-Pattey at ect@esf.org

Medical Sciences (EMRC)



Stress and Mental Health (EuroSTRESS)

Repetitive and uncontrollable stress is known to be a powerful risk factor for mental disorders. Whether an individual will respond adaptively or maladaptively to a stressor is defined by his/her genetics, developmental history and the environment in adulthood. In particular traumatic experiences in early life, notably neglect or abuse during childhood, could considerably add to the risk of subsequent psychiatric illnesses including major depression, psychosis and post traumatic stress disorder. The societal and economic burden of these stress-related illnesses is enormous. Hence it is of great importance to come to a better understanding of these influences of stress on mental health. The EUROCORES programme EuroSTRESS will focus on two theme priorities in an interdisciplinary fashion:

- How can early life experience and genetic background in concert evoke lasting changes in signalling pathways within the brain, resulting in altered behaviour and increased vulnerability to negative effects of stress in adulthood?
- How can periods of repetitive stress or traumatic events in adulthood (against a background of life history and genetic vulnerability) disrupt brain function such that the chances on precipitation of specific psychiatric disorders are increased?

More information: www.esf.org/eurostress contact Thomas Bruhn at eurostress@esf.org

Medical Sciences (EMRC)

Science of Protein Production for Functional and Structural Analysis (EuroSCOPE)

A better understanding of the function of a protein requires a detailed analysis of its structure. Such studies (e.g. carried out on crystallised protein) require substantial amounts of high quality protein. The difficulties of producing sufficient amounts of protein for structure-function analysis as well as for X-ray analysis (crystallisation) constituted thus far a major bottleneck for proteomics. Although this was and is well recognised by the scientific community, funding for a programme addressing this topic systematically has not been available since the beginning of the post-genomic phase that started proteomics.

The EUROCORES programme EuroSCOPE bridges this gap by bundling resources within Europe to accelerate research on protein production through scientific innovation and collaboration. The programme addresses the major stumbling blocks in the production of proteins for functional and structural analysis. With the focus on the basic understanding of the mechanisms underlying protein production, targeting, folding and stability, which eventually may result in the improvement of existing and the design of new expression systems. The detailed subfields of research include bottlenecks in gene expression; targeting the synthesised protein to a specific cellular location; and folding and stability of expressed proteins.

EuroSCOPE activities:

EuroSCOPE hosted a successful workshop at the 13th European Congress on Biotechnology in Barcelona, Spain, in September 2007. The EuroSCOPE workshop portrayed ongoing research activities and successfully generated discussion with the larger biotechnology community. ECB 13 attracted more than 1100 participants and hence this congress provided a unique opportunity to promote both ESF and the EUROCORES Programme EuroSCOPE.



Bacillus subtilis. Courtesy of Professor van Dijl.

More information: www.esf.org/euroscope or contact Thomas Bruhn at euroscope@esf.org

Medical Sciences (EMRC) Life, Earth & Environmental Sciences (LESC)

Dynamic Nuclear Architecture and Chromatin Function (EuroDYNA)

One of the major challenges in biology is to understand how the genome functions in terms of orchestrating the expression of the many thousand genes it encodes. To tackle this issue, the European Science Foundation (ESF) together with national funding agencies from eight European countries set the stage for 40 research groups to join forces and to coordinate their efforts across Europe within the framework of the European Collaborative Research (EUROCORES) Programme EuroDYNA.

EuroDYNA aims at advancing our knowledge of nuclear organisation in relation to the control of gene expression. The Programme gathers and combines expertise in different fields such as dynamic chromatin structure and nuclear architecture, regulation of gene expression, RNA processing and transport as well as genome surveillance. Latest technologies in molecular biology and biochemistry are employed together with advanced microscopy, structural analysis and computational approaches in order to gain a deeper insight into how the nucleus operates.

In addition to its multidisciplinary research, the Programme offers a diverse array of networking opportunities to the entire EuroDYNA community; providing training possibilities and establishing a platform to stimulate new research initiatives between scientists with related yet slightly different scientific interests and to foster synergy with other national and European initiatives. During its lifetime, the Programme has so far established 14 new collaborations across various Collaborative Research Projects (CRPS). Amongst the highlights are activities like:

Biologists meet physicists head on in a brainstorming session

ESF recently organised a brainstorming meeting between the two EUROCORES Programmes EuroDYNA and SONS to exchange information and stimulate new research initiatives. With biology becoming increasingly multidisciplinary ESF works to facilitate cross-disciplinary exchange.

How we can benefit from each other

Two of EuroDYNA's Collaborative Research Projects focusing on stress induced global changes in gene expression in yeast and mammals respectively, came together to exchange techniques, reagents and establish collaborations.

Summer school

EuroDYNA co-sponsored a summer school in Corsica, France where two EuroDYNA investigators gave lectures and seven EuroDYNA students and post docs attended. The summer school aimed to integrate the various biological and physical approaches used to study DNA and chromosomes.



Mitotic view of cultured human cells. Micrograph by Erwan Watrin, IMP, Vienna.

More information: www.esf.org/eurodyna or contact Astrid Lunkes at eurodyna@esf.org

RNAQuality

Cells have developed multiple systems of quality control to ensure they operate accurately. This also applies to the biogenesis and metabolism of various classes of RNAs, which only recently have been shown to be subjected to stringent surveillance mechanisms. Such systems target erroneous RNA molecules for degradation before irreversible cellular damages can occur.

RNA quality control has only recently emerged as a new field of RNA research and is now one of the most exciting areas of molecular biology. ESF promotes research on this cutting-edge topic through the EUROCORES Programme RNAQuality. Sixteen research groups from nine European countries participate in RNAQuality. Their projects aim at uncovering processes that act as quality control checkpoints in gene expression and understand how these function at a molecular level. Multidisciplinary approaches, ranging from molecular and cellular biology to structural analysis and high-throughput and computational approaches will be employed in diverse model systems. This EUROCORES Programme is the first European-wide Programme to address the next big challenges in quality control of gene expression.

The RNAQuality community met at its kick-off meeting on 11 May 2007 in Strasbourg to discuss the needs of the field. Future activities will put emphasis on training of young researchers and establishing a platform for European investigators to join forces and to stimulate new research initiatives in this exciting area. Amongst the forthcoming events planned are a PhD school in 2008 and a larger conference in 2009.



Chironomous tentans: Co-localisation of the RNA Exosome (Rrp4) and sites of mRNA processing (snRNPs). Courtesy of Neus Visa and Viktoria Fager.

More information: www.esf.org/rnaquality or contact Astrid Lunkes at rnaquality@esf.org

Challenges of Biodiversity Science (EuroDIVERSITY)

The aim of the EuroDIVERSITY programme is to support the emergence of an integrated biodiversity science based on an understanding of fundamental ecological and social processes that drive biodiversity changes and their impacts on ecosystem functioning and society. Ecological systems across the globe are being threatened or transformed at unprecedented rates from local to global scales due to the ever-increasing human domination of natural ecosystems. In particular, massive biodiversity changes are currently taking place, and this trend is expected to continue over the coming decades, driven by the increasing extension and globalisation of human affairs.

The EuroDIVERSITY programme meets the research need triggered by the increasing human footprint worldwide with a focus on generalisations across particular systems and on the generation and validation of theory relevant to experimental and empirical data.

This multidisciplinary programme in biodiversity science brings together more than 100 research groups from 20 countries. Total budget of the Programme is about 10 Mio Euros.

The programme was launched in April 2006 and includes 10 international, multidisciplinary collaborative research projects, which are expected to contribute to this goal by initiating or strengthening major collaborative research efforts. Some projects are dealing primarily with microbial diversity (COMIX, METHECO, MICROSYSTEMS), others try to investigate the biogeochemistry in ecosystems (BEGIN, BioCycle), the landscape and community ecology of biodiversity changes (ASSEMBLE, AGRIPOPES, EcoTRADE), and others focus on the diversity in freshwater (BIOPOOL, MOLARCH).

The EuroDIVERSITY fosters pan-European collaborative research, networking and training as well as dissemination of scientific results and activities developed. In the



Cliffs of Inishore, Ireland. Copyright Yann Arthus-Bertrand/Altitude.

framework of the Programme, scientists will further bridge the gaps between the natural and social sciences, between works on terrestrial, freshwater and marine ecosystems, between work on plants, animals and micro-organisms.

In 2007, the EuroDIVERSITY programme integrates the different European research teams involved, with collaborative field work campaigns over Europe, a summer school, international workshops, an annual Programme conference in October in Paris, as well as joint peer-review publications.

More information: www.esf.org/eurodiversity or contact Inge Jonckheere at eurodiversity@esf.org

Ecosystem Functioning and Biodiversity in the Deep Sea (EuroDEEP)

The deep sea is the largest environment on the planet, the least well known and one of the least studied. It contains extremely large, continuous habitats such as the millions of km2 of abyssal plains and the 65,000 km long mid-oceanic ridge system. At the same time, it encloses relatively small localised geological features such as canyons, seamounts, deep-water coral reefs, hydrothermal vents and fluid seepages on mud volcanoes, which support unique microbial and faunal communities. What little we know about deep-sea ecosystems supports the hypothesis that more species occur in the deep sea than anywhere else on Earth. As much as 90 per cent of species collected in a typical abyssal sediment sample are new to science.

The official launch of this multidisciplinary programme in deep sea biodiversity science has taken place in June 2007. The programme brings together more than 25 research groups from 10 countries and aims at the exploration and identification of the different deep-sea habitats, assessing both the abiotic and biotic processes that sustain and maintain deep-sea communities. This will enable researchers to better describe, explain and predict variations of biodiversity within and between deep-sea habitats, their consequences for deep-sea ecosystem functioning and the interactions of the deep sea with the global biosphere.

EuroDEEP is a programme for deep-sea biology and ecology that strongly depends and requires collaboration between taxonomists, microbiologists, ecologists, physical and chemical oceanographers and geologists.

EuroDEEP has mobilised about 4 million Euros from 8 national funding agencies that allow four trans-national collaborative research projects to study the deep sea ecosystem functions in contrasting southern European deep-sea environments (BIOFUN, Project Leaders are Prof. Sardà and Dr. Ramirez-Llodra, ES); to study

microbial diversity in hypersaline lakes (MIDDLE Project, leaded by Dr. Yakimov IT); to investigate colonisation processes in chemosynthetic ecosystems (CHEMECO Project, leaded by Dr. Gaill, FR) and to unravel population connectivity for sustainable fisheries (DEECON Project, under guidance of Dr. Stenseth, NO) during the next three years. Strong links will be further established with other major initiatives and programmes (CIESM, CoML, COMARGE, HERMES, ESSP, FP7 Deep-Sea Floor Frontier initiative...).



Barthymodilus from MAR. Copyright ATOS/VENTOX, Ifremer.

More information: www.esf.org/eurodeep or contact Inge Jonckheere at eurodeep@esf.org

Climate Variability and the Carbon Cycle - Past, Present and Future (EuroCLIMATE)

The climate for the next century, and thereafter, is expected to be largely different from the present and the recent past. CO2 concentration is expected to reach levels unequalled over the past millions of years. Temperature is also rising rapidly. The last 150 years of meteorological observations and the reconstruction over the last millennium display a quite uniform climate. Only the reconstruction of paleoclimates extending much further back in time can help build a database with a broader climatic diversity. Such a database will, in addition, offer the possibility to test the reliability and robustness of the models used for future climate scenarios and thus to better understand how the climate system works.

EuroCLIMATE focuses both on reconstructing past climates using different well-dated and calibrated proxy records and on modelling climate and climate variations for a better understanding of the underlying physical, chemical and biological processes involved.



Iceberg LancasterSound. Courtesy of H. Oerter.

More information: www.esf.org/euroclimate or contact Daniela Turk at euroclimate@esf.org

4-D Topography Evolution in Europe: Uplift, Subsidence and Sea Level Change (TOPO-EUROPE)

The TOPO-EUROPE programme is concerned with the geoscience of coupled deep Earth and surface processes and their effects on the evolution of the topography of continents and their margins. In addition to addressing world-class issues of Earth-System sciences, TOPO-EUROPE has considerable societal relevance, since topography directly affects humanity as a result of secular landscape changes that have a direct bearing on environmental change and geohazards. TOPO-EUROPE intends to investigate the 4-D topography evolution of the European continent, its margins, and adjacent parts of North Africa, Asia and the Middle East. This requires an interdisciplinary approach that integrates research in the subdisciplines of geomorphology, geochronology, geology, tectonics, geochemistry, petrology, geophysics, hydrology, geodesy, remote sensing and various branches of geotechnology.

This ESF EUROCORES initiative is a unique opportunity to establish a world-class program based on Europe's strengths in integrated Solid-Earth sciences.



Gravitational anomaly map for Europe. Courtesy: NASA.

More information: www.esf.org/topoeurope or contact Didier Hauglustaine at topo-europe@esf.org

Challenges of Marine Coring Research (EuroMARC)

The EuroMARC (Challenges of Marine Coring Research) programme focuses on three major science themes: Earth's surface environmental change, processes and effects; the deep biosphere & subseafloor ocean; solid Earth cycles & geodynamics. Obtaining key cores from the sub-seafloor is crucial to progress in the Earth and environmental sciences because the oceans regulate climate, cover the sites of fundamental geodynamic, geochemical and biological processes and preserve high-resolution records of the Earth history. Over the past 30 years, European researchers have played a leading role in international marine coring that has been central to most of the important advances in global dynamics science with far-reaching implications for the Earth and environmental sciences. They have contributed markedly to important scientific discoveries such as the operation of plate tectonics and the accretion of the oceanic lithosphere. Recent scientific advances in the field include the study of deep microbial communities, the discovery of frozen methane (gas hydrates) below the sea floor, the high-resolution evidence of past extreme and rapid climate variations, the establishment of new models for passive margin evolution, the understanding and quantification of oceanic biogeochemical cycling, and the discovery of large igneous provinces associated with continental break-up at volcanic margins.

EuroMARC is an essential enabling tool to boost European leadership in the planning of marine drilling and coring expeditions and the execution of European proposals, hence ensuring the effective exploitation of research opportunities. EuroMARC is also an important contribution to the European participation in both the International Marine Past Global Change Study (IMAGES/PAGES), and the Integrated Ocean Drilling Program (IODP), in liaison with the European Consortium for Ocean Research Drilling (ECORD).



Shallow-water coral reefs provide information on recent paleoclimates and environmental changes. Courtesy: K. Sugihara and T. Yamada.

More information: www.esf.org/euromarc or contact Didier Hauglustaine at euromarc@esf.org

Processes in the Passive Continental Margins (EUROMARGINS)

The nations of Europe share one of the world's longest passive margin systems and one of the most distinctive morphological features of the world's ocean basins. A remaining frontier for natural resources, passive margins mark the complex transition between continental and oceanic crust, with large sedimentary accumulations. In addition, passive continental margins, associated with unstable slopes, represent a major source of natural hazards, especially to the coastal communities of Europe.

The EUROMARGINS programme provides the international framework for promoting innovative, interdisciplinary work for the imaging, monitoring, reconstruction and modelling of the physical, chemical, and biological processes in the European passive continental margins. It encourages the development of new technologies and conceptual models aiming at the advancement of integrated research into the mechanisms responsible for continental break-up and the world ocean margin formation. The pooling of human resources, training of a new generation of interdisciplinary geoscientists, and optimal sharing of observational platforms or analytical and modelling facilities are considered important value-added ingredients of the EUROMARGINS programme.



NAUTINIL cruise (2003). Microbial mats observed at a brine seep at Chefren mud volcano in the Eastern Mediterranean Sea off Egypt. Courtesy: IFREMER.

More information: www.esf.org/euromargins or contact Didier Hauglustaine at euromargins@esf.org

European Mineral Sciences Initiative (EuroMinScI)

The chemistry of the crust/mantle/core depends on elements partitioning between minerals, and phenomena, such as super-plasticity or super-elasticity in minerals, could have a direct impact on large scale geological processes. Major advances in the use of physics-based experimental techniques and atomistic computer simulation now make it possible to understand the relation between the structure of minerals and their physical properties. At the same time, measurements of many minerals properties in situ at extreme conditions of temperature and pressure corresponding to those existing in the earth's interior are now feasible.

The EuroMinScI programme draws together different experimental techniques and computational activities into integrated research projects. Sometimes it calls for separate "computer experiments" while at other times computer simulation is needed even to interpret the experimental data uniquely. It also addresses the need for young researchers with an academic background in Earth sciences to be trained more in the physics-based techniques, where the methods are very different from traditional Earth sciences.







More information: www.esf.org/eurominsci or contact Bernard Avril at eurominsci@esf.org

Life, Earth & Environmental Sciences (LESC) Physical & Engineering Sciences (PESC)

Self-Organised NanoStructures (SONS I) (2002 Call)

Self-organisation, or self-assembly, is a process in which a supramolecular organisation is established in a complex system of interlocking components. The mechanism that produces the organization is determined by the competing interactions between the components. The hierarchy of interactions determines the hierarchy of levels in the final nanostructured material.

Thus self-organising compounds allow a defined and well-controlled construction of ordered architectures on a nanometer-scale.

The SONS programme concerns the utilization of supramolecular interactions for the synthesis and positioning of functional assemblies, macromolecules, dendrimers, liquid crystals, tailor-made polymers and inorganic nanoparticles.

Molecular self-assembled architectures may find applications in advanced technologies such as new chip technologies (DNA probes, lab-on-the-chip), sensors transistors, data storage, light-emitting diodes, communication technologies, magnetic information storage, photovoltaic cells, and molecular motors and machines.



STM image of BDG+ NTCDI assemblies on Au(344). Group of Prof. Jose Enrique Ortega, Universidad del Pa ıs Vasco, Spain (MOL-VIC Project)

More information: www.esf.org/sons or contact Antonella Di Trapani at sons@esf.org

Self-Organised NanoStructures (SONS) II (2005 Call)

For the scientific description see SONS I.

The first SONS Programme (first call) was launched in May 2004 and lasted for three years. The second call for Proposals of SONS was launched in May 2005, and seven Collaborative Research Projects (CRPs) were selected for funding bringing together 51 research groups from 15 countries.



Photo of LED under operation and device structure obtained with hybrid nanostructured metal oxide / electroluminescent polymer. (dr. Saif Haque, Imperial College London, SOHYD Project)



A molecular 'Boojum' – a chiral liquid crystalline nanoparticle. The chemical structure design is shown above the liquid crystal texture of the chiral nematic phase. Courtesy of Prof. John W. Goodby and Isabel M. Saez.

More information: www.esf.org/sons2 or contact Antonella Di Trapani at aditrapani@esf.org

Friction and Adhesion in Nanomechanical Systems (FANAS)

Everyday operations on a broad range of scales, from nanometer and up, depend upon the smooth and satisfactory functioning of countless tribological systems. Friction is intimately related to both adhesion and wear, and all three require an understanding of highly nonequilibrium processes occurring at the molecular level to determine what happens at the macroscopic level.

The fast development, over last decades, of micro- and nano-mechanics brought up the need for a more basic understanding of the origins and behavior of friction. Standard lubrication techniques used for large objects are expected to be less effective or even not applicable in the nano-world. Novel methods for control of friction and manipulation of nanoscale objects are therefore needed. A better understanding of triboprocesses has also a major impact for the protection of the environment (reduction of lubricant and energy consumption).

The aim of this EUROCORES programme on FANAS is to get a better insight on the origins of friction and adhesion and to learn how to control them. In particular: understanding the relationship between adhesion and friction at the nano- and microscales and the mechanisms of energy dissipation in tribological systems, bridging the gap between the nano, micro and macro scales in friction, lubrication and adhesion, control and modification of frictional properties, nanomanipulations at interfaces, studies of biomimetic tribological systems and tribochemistry.



Friction in everyday life

More information: www.esf.org/fanas or contact Antonella Di Trapani at fanas@esf.org

Fundamentals of NanoElectronics (FoNE)

The scientific goal of the Fundamentals of NanoElectronics (FoNE) Programme is the development of new concepts necessary to master the operation of nano-scale devices. To realise the potential of nanoscale electronics it is necessary to understand quantum phenomena in semiconductors wires and dots, and control size, interface and proximity effects in a wide variety of hybrid nanostructures. FoNE is a four year programme which recognizes that understanding the above phenomena is crucial to the development of nanoscale electronics and, thus, advances European research by concentrating and networking the activities of world-leading research groups.

The research in FoNE addresses many areas of nanoelectronics and will create the necessary knowledge for a society in which microelectronics is gradually replaced by nanoelectronics.

FoNE focuses on: nano-spintronics and hybrid devices with integrated superconduction, semiconducting and magnetic functionalities; electron-dependent transport in single-molecules and carbon nanotubes (CNTs); quantum transport, noise and related phenomena in quantum dots, wires and other novel structures.

A Summer School on 'Quantum Transport and Dynamics in Nanostructures', 6-18 August 2007, in Windsor, UK, was organised by Vladimir Falko (University of Lancaster, UK), Project Leader of SpiCo, was attended by 20 FoNE researchers. Invites lecturers included A. Geim, University of Manchester, UK, and M. Dresselhaus, MIT, USA.

A second workshop is due to take place in Naples, 9-13 December 2007, on 'Quantum Transport, Magnetic Nanodevices and Spintronic'. This workshop, organized by Arturo Tagliacozzo and Chris Marrow, will be an opportunity to network researchers from three CRPs: SpiCo, SPINTRA and SPINCURRENT. A second Scientific Committee meeting took place in Windsor, on the 10 August 2007 and the Project Leaders proposed to have more Schools (which will probably take place in March 2008) for training of students and to hold one Conference on 'NanoElectronics' in 2008. In terms of scientific publications and outputs from the FoNE groups, it is worth mentioning among recent discoveries the observation of bistability of nuclear spin polarisation in quantum dots with the theory of the effect of a 'nuclear spin switch' developed within SpiCo [A. I. Tartakovskii, T. Wright, A. Russell, V. I. Falko et al., Phys. Rev. Lett. 98, 026806 (2007)] and the new dynamic polarisation method developed by the IMPRESS partners [G. Morley et al., Phys. Rev. Lett.98, 220501 (2007)].



Kerr Microscope image of Co/Pt nanowires. Group of Dr. Chris Marrows, University of Leeds, United Kingdom (SPINCURRENT Project)



Figure 1: N@C60 is a nitrogen atom trapped inside a football-shaped carbon molecule called a buckyball (Prof. Andrew Briggs, University of Oxford, IMPRESS Project)

Figure 2: Dynamic nuclear polarization of N@C60 molecules. The resonance on the left is due to the polarized nuclei, while the smaller one comes from the remaining unpolarized nuclei (Prof. Andrew Briggs, University of Oxford, IMPRESS Project).

More information: www.esf.org/fone or contact Antonella Di Trapani at fone@esf.org

Cold Quantum Matter (EuroQUAM)

Quantum Matter is a matter in which all the constituent atoms and molecules are in a single quantum state and behave coherently as a single quantum object. It typically exists at temperatures less than one millionth of a degree above absolute zero. In the long term, quantum matter is expected to have applications in diverse areas ranging from high-precision measurement to quantum information. The field of quantum matter is a complex one that draws on atomic and optical physics, chemical physics and physical chemistry, plasma physics, statistical physics, solid-state physics and guantum chemistry. Although the field is driven by fast advances in experimental capabilities, theoretical work is essential to guide experiments and explain their results. The EuroQUAM Programme will provide vital opportunities for scientists from different disciplines and countries to collaborate, and in particular will stimulate collaborations between experiment and theory. Such collaboration is essential if Europe is to maintain its present status as an international leader in the field.

The call for proposals with 15 countries participating was launched at the end of March 2006. The Review Panel met on 28-29 June 2006 and selected 17 of the 24 submitted outline proposals. Following an international peer review of the submitted full proposals, the Review Panel reconvened on 7-8 December 2006 to discuss and rank the full proposals. On 19 December 2006 the results of the ranking meeting were presented to the Management Committee. After confirmation of all the participating funding agencies, 6 of the full proposals on the list received funding. The programme brings together 37 principal investigators and 5 associated partners from Austria, Croatia, the Czech Republic, Denmark, Finland, France, Germany, Italy, the Netherlands, Poland, Spain, the UK and the United States.

The first scientific committee meeting for the programme was held on 09 July 2007. This event brought together not only the members of the Scientific Committee but also many of the principal investigators from various consortia. EuroQUAM has plans for exciting networking and dissemination activities stating in April 2008 with a major programme-wide conference to be held in Barcelona.

The funded projects within EuroQUAM are:

Electrostatic trapping of polar molecules

Project Leader: Tim Freegarde, University of Southampton, UK



Collisions of Cold Polar Molecules (CoPoMol)

• Project Leader: Jeremy Hutson, University of Durham, UK

Controlled Interactions in Quantum Gases of Metastable Atoms (CIGMA)

• Project Leader: Gerhard Birkle, Technische Universität Darmstadt, DE

Fermionic Mixtures of Ultracold Atoms: Pairing, Superfluidity, and Quantum Phases (FerMix)

 Project Leader: Rudolf Grimm, Austrian Academy of Science, AT

Quantum-degenerate dipolar gases of bialkali molecules (QUDIPMOL)

• Project Leader: Matthias Weidemüller, Albert-Ludwigs-Universität Freiburg, DE

Quantum Simulation using cold atoms in optical lattices (DQS)

 Project Leader: Christopher J. Foot, Oxford University, UK



More information: www.esf.org/euroquam or contact Farzam Ranjbaran at euroquam@esf.org

Quantum Standards and Metrology (EuroQUASAR)



The foundation for a new area of precision measurement was laid by recent Nobel-prize awarded achievements such as laser cooling, Bose-Einstein Condensation and precision metrology (optical comb generators). European scientists have had a significant share of contributions in realising these achievements. EuroQUASAR will build on European expertise to develop a new generation of quantum standards with unprecedented performance. This programme will help pave the way for the achievement of future optical clocks and inertial sensors of record precision as well as novel fundamental tests based on atomic and molecular quantum systems with well defined, unique and perpetual features.

EuroQUASAR is one of the seven recently selected EUROCORES programmes that resulted from the 2006 call for theme proposals.

The call for outline proposals was launched in March 2007 with a deadline for receipt of proposals of 11 May 2007. With one extension of the deadline to 15 May, 7 outline proposals have been submitted to the ESF. The International Review Panel was constituted and approved by the EUROCORES Science Advisory Board. The sifting meeting was held on 2 July when the Review Panel made careful assessment of the seven submitted proposals and selected 5 of these to be further developed into Full Proposals. The deadline for Full Proposal submission was 13 September after which the international peer review will be conducted. The Full Proposals, referee assessments and applicants' responses will be evaluated by the Review Panel in their Ranking meeting of 14 December. It is expected that the research and networking activities will start in March or April 2008.

More information: www.esf.org/euroquasar or contact Farzam Ranjbaran at euroquasar@esf.org

Smart Structural Systems Technologies (S3T)

Major incidents due to failures in engineering infrastructure, modern transportation or other spheres of human activity are becoming less acceptable; zerorisk protection of citizens is now a long-term aspiration of governments. Whether it is for civil infrastructures, industrial plants, or a fleet of trains or aircraft, operators and engineers are under pressure to make every possible effort to assure public safety in addition to increased operational efficiency and cost reduction. Consequently, there is considerable attention to extending indefinitely, through minimum intervention, the safe and economical operational lifetime of individual structural components and entire systems. A "smart structure" is a system that has the ability to learn about its environment, process the information in real time, reduce uncertainty, and generate and execute control actions in a safe and reliable manner to accomplish the desired objective.

The EUROCORES S3T Programme seeks to lay down theoretical and experimental bases for the integration of state-of-the-art sensors into systems to monitor and control major structures. It brings together scientists and engineers from disciplines such as Materials Science, Civil, Mechanical, Aerospace, and Electrical Engineering as well as Computer Science.

The S3T Programme is in its research and networking phase. Of the 55 submitted Outline Proposals 16 were recommended for funding by the Review Panel in July 2005, and 7 received funding and started their research in September-November 2006. These projects bring together over 40 principal investigators and associated partners from Belgium, the Czech Republic, Finland, France, Poland, Portugal, Spain, the UK as well as the US.

- Comparison of vibration control in civil engineering using passive and active dampers (COVICOCEPAD)
- Project Leader: Rui Barros, (PT), University of Porto
- Material algoritms, Finite Element methods, Experiments (MAFESMA)
- Project Leader: Jan Van Humbeeck, (BE), Catholic University of Leuven
- Micro-MeasurementandMonitoringSystemforAgeing Underground Infrastructures (UndergroundM3)
- Project Leader: Kenichi Soga, (UK), University of Cambridge
- Shape Control of Membrane Reflectors (SCMeRe)
- Project Leader: André Preumont, (BE), Université Libre de Bruxelles
- Shape Memory Alloys to Regulate Transient Responses in civil engineering (SMARTER)
- Project Leader: Michel Frémond, (FR), Laboratoire Central des Ponts et Chaussées
- Smart Aircraft Morphing Technologies (SMORPH)
- Project Leader: Jonathan Cooper, (UK), University of Liverpool
- Smart sensing for Structural Health Monitoring (S3HM)
- Project Leader: André Preumont, (BE), Université Libre de Bruxelles



Prague Metro Courtesy of Underground M³

More information: www.esf.org/s3t or contact Farzam Ranjbaran at s3t@esf.org

BOREAS: Histories from the North - Environments, Movements, Narratives

The circumpolar North is now widely accepted as a unique early warning system for changing relations between society and the environment.

This region, which includes the Arctic and the sub-Arctic, has moved to the centre of global debates on environmental change, human adaptation, new postcold-war partnerships and issues of post-colonial governance and strategy. However, much Arctic research has been dominated by natural science agendas, looking at the region as a natural 'laboratory'.

Inhabitants of the Arctic are often seen as natural variables, while their understandings of the natural, cultural and spiritual processes that have shaped Arctic civilisations have not been adequately taken into account.

For political and other reasons, the circumpolar region has only recently re-emerged as "one" area, revealing past connections and current common problems and pointing to future challenges, such as the relationships between communities and the modern state (whether Soviet, post-Soviet or Welfare), NGOs and the global economy.

The involvement of local populations as research partners is very advanced in the North, and BOREAS offers a unique opportunity for scholars to explore the intersections of Southern (or 'Western') ways of knowing the environment and their local counterparts. BOREAS can redefine the geography of knowledge in Northern Europe and relate it to circumpolar regions worldwide, by moving beyond South-North dichotomies and centre-periphery models, as well as by crossing disciplinary and national boundaries. BOREAS also invites the research community to reflect upon their own approaches to studying the North.





Yamal Peninsula, Russia, November 2006. Courtesy of Florian Stammler

More information: www.esf.org/boreas or contact Rüdiger Klein at boreas@esf.org

Consciousness in a Natural and Cultural Context (CNCC)

Until recently, many scientists considered consciousness to be an unsuitable topic for scientific research. Prompted by technological developments (including brain imaging techniques) as well as conceptual changes, this attitude has shifted, and scientific interest in consciousness has greatly increased during the past decade. Currently, the explanation of consciousness is considered by many to be one of the major unsolved problems of modern science.

The CNCC programme aims to meet this need by fostering top-quality consciousness research in Europe. Given the wide variety of phenomena which fall under the heading of consciousness – perception, emotion, attention, self-awareness, sensation, intentionality, dreaming, wakefulness and others – progress will depend on the integration of available scientific resources from a variety of theoretical and empirical disciplines and methods. Empirical data can serve to challenge and validate theoretical analyses, while conceptual analysis can provide directions and tools for the empirical scientists.

The CNCC programme aims to support the emergence of an integrated and truly interdisciplinary science of consciousness, within the humanities and between the humanities and the social, natural, and biomedical sciences. The programme encourages research that explicitly addresses the natural and cultural dimension of consciousness.



More information: www.esf.org/cncc or contact Eva Hoogland at cncc@esf.org

Inventing Europe: Technology and the Making of Europe, 1850 to the Present

This EUROCORES programme aims at establishing robust transnational research teams that develop novel perspectives on the mutual shaping of transnational technology developments and the process of European integration. Inventing Europe thus looks at the processes and perceptions of technological change as an important arena for constructing Europe on the material, institutional, and discursive levels. The programme places the history of European integration within a broader transnational history of Europe, and seeks to transcend the range of national histories of Europe. From this perspective, European integration began in the latter part of the 19th century and unfolded unevenly across the 20th century through a range of multilayered and contested transnational processes in which technology was deeply implicated, alongside as much as within the political arena.



To celebrate the creation of the European Coal and Steel Community, a train decorated with flags and carrying coal crosses the French-Luxembourg border on 10 February 1953. This event exemplifies the intimate relationships between technology and European Integration.

More information: www.esf.org/inventingeurope or contact Rüdiger Klein at inventingeurope@esf.org

Modelling Intelligent Interaction Logic in the Humanities, Social and Computational sciences (LogICCC)

One of the most crucial and striking features of humans and their societies, is the phenomenon of intelligent interaction. Many disciplines from the humanities to the physical sciences hold separate pieces of the puzzle posed by this pervasive but also elusive phenomenon. The EUROCORES programme "LogICCC – Modelling Intelligent Interaction" aims at a deeper understanding of intelligent interaction by letting logic in its modern guise act as a catalyst and a 'match maker' between these different disciplines. This will lead to a general framework for analyzing intelligent interaction – and the key notions which it naturally brings with it, namely, communication, cognition and computation.

To achieve this goal, researchers from a wide variety of disciplines are invited to team up. Some of these researchers may be logicians, others may not. But what all participants in LogICCC projects have in common is their interest in understanding interaction, pursued with the common language and models provided by logic in its modern, pluriform, and outward-looking guise. In this way, new ideas will flow symmetrically between many disciplines, enriching logic itself in the process.

In addition, the EUROCORES programme LogICCC is looking for a balance between fundamental theoretical advances and innovative applications of logical models in the thematic areas of interaction, communication, computation, and cognition.



More information: www.esf.org/logic or contact Eva Hoogland at logic@esf.org

The Evolution of Cooperation and Trading (TECT)

TECT explores new research perspectives on the evolution of cooperation and trading, through empirical, theoretical and modeling methods, on an array of organisms, ranging from microorganisms to human societies.

TECT is based on the working assumption of an evolutionary continuity of cooperation, both genetic and cultural, an assumption thought to be in need of a study in its own right. The TECT research agenda draws on recent advances in life, natural, human and social sciences. Across all these areas, a common theoretical framework for explaining biological and cultural evolution has emerged, which emphasises the properties of interactive, goal-directed agents. At the same time, methodological advances in several disciplines have provided new information about the properties of agents and their interactions. Examples include new tools from molecular genetics for inferring evolutionary relationships, new experimental work in economics, the development of neuroimaging methods, the renaissance of cross-cultural, comparative research. TECT's multinational research teams cover anthropology, artificial intelligence research, biology, chemistry, cognitive sciences, economics, history, linguistics, mathematics, neurosciences, philosophy of science, political sciences, psychology, and sociology. TECT allows researchers to explore the potential for the exchange of models and theory as well as the transfer of empirical methods and results from one discipline to another. The overall goal of TECT is to build a multidisciplinary research framework that encourages collaborative research into the evolution of cooperation and trading both within and between human, social, life and natural sciences.





More information: www.esf.org/tect or contact Rüdiger Klein at tect@esf.org

The Origin of Man, Language and Languages (OMLL)

Language may be considered as one of the defining characteristics of the human species. The development of linguistic and cognitive skills in the prehistoric past can be studied nowadays with reasonable expectations of success thanks to new perspectives which have been developed through the collaboration of several disciplines, including genetics, linguistics, evolutionary and palaeo-anthropology, archaeology, neurophysiology, cognitive sciences and artificial intelligence studies. Comparative maps of genetic and linguistic human families suggest interesting correlations between the distribution of genetic diversities and of linguistic groups. How the development of linguistic skills can be linked to the evolution of the brain and of its cognitive strategies – both in phylogenetic and ontogenetic perspectives – can now be explored by empirical studies and modelling tools alike. The OMLL programme supports collaborative research in this area.



Mark Stoneking obtains information for genetic sampling from a resident of Koriovuku village on Ranonga Island, in the Western Province of the Solomon Islands. Courtesy of Brigitte Pakendorf.

More information: www.esf.org/omll or contact Eva Hoogland at omll@esf.org

Cross-national and Multi-level Analysis of Human Values, Institutions and Behaviour (HumVIB)

The EUROCORES programme HumVIB seeks to systematically analyse the now available ESS and other cross-national survey data in an innovative and comparative way on a European scale. It is the overarching objective to realise the concept of Europe as a natural laboratory for the social sciences in which the diversity of institutions, practices, histories, and resources enable researchers to analyze how human values, attitudes and behaviour are affected by the characteristics of the multi-level systems or contexts in which they occur.

The HumVIB EUROCORES programme is designed to combine the unprecedented individual-level data resources now available in Europe and typified by the European Social Survey (ESS), the comprehensive system-level and contextual data, appropriate new methods of multi-level analysis as well as the testing of carefully elaborated theories of the effects of institutions and structures or, more generally, contextual factors on individual attitudes and behaviour.



The European Parliament is one of the major political institutions. In this picture Parliamentarians cast a vote in 2005.

More information: www.esf.org/humvib or contact Frank Kuhn at humvib@esf.org

Social Sciences (SCSS)

European Collaborative Research Projects Calls of 2005, 2006 and 2007 (ECRP I, II and III)

The ECRP programme is designed to advance high quality responsive mode, researcher-led, collaborative international research within and across all fields of the social sciences, offering opportunities to test innovative ideas, pool multidisciplinary expertise and strengthen European research capacity. In 2007, funding agencies of 19 countries are participating in the scheme and successful projects will start in March 2008.

ECRP proposals are evaluated at the European level within a common peer review process, with common criteria and procedures, after which funding decisions are taken at the national level by the agencies concerned. The process is coordinated by ESF. The ESF web pages include a set of Frequently Asked Questions and related documentation on this EUROCORES programme. In addition, lists of the Collaborative Research Projects awarded in the 2005 and 2006 competitions are available on the web.



The future of young citizens in Europe is only one of many interesting subjects being researched under the investigator-driven ECRP Scheme.

More information: www.esf.org/ecrp or contact Frank Kuhn at ecrp@esf.org

Social Sciences (SCSS)

The ESF Collaborative Research Tool Kit

Based on our extensive science management experience, the European Science Foundation (ESF) has developed the 'Collaborative Research Tool Kit', a unique support tool for national and international research programmes. Our experience includes the management of currently 30 EUROCORES Programmes, the EURYI Scheme, ESF Research Networking Programmes as well as COST Actions. ESF also has vast experience dealing with various procedures, cultures, languages and regulations at the European level.

What is the 'Collaborative Research Tool Kit'?

The "**Collaborative Research Tool Kit**" offers support which is targeted to national research funding and research performing organisations and which is flexible and can be tailored to meet the different needs of our customers. The tool kit provides support:

- To develop collaborative research in areas of common strategic priority (E.g. ERA-Nets, ERA-Net PLUS)
- To publish a common Call for proposals to support international collaborative research projects
- To synchronise funding decisions

The support of the ESF **"Collaborative Research Tool Kit**" is offered in three different packages:

The Basic Package includes:

Support for the administrative preparation and coordination of the Call for proposals, including: • Criteria definition

- National restrictions/priorities
- Commitment guidelines for participation
- Optimal timing for the Call in the light of subsequent handling procedures

Management of the international peer review:

High quality international peer review operated by ESF, including:

- Online-submission Process
- Single or multistage Peer Review, as appropriate
- Independent Review Panel
- Independent referee reports for each proposal
- · Applicant's comments on anonymous referee reports, if required
- · Overall quality assurance, including safeguarding good scientific practice

The Standard Package includes the support of the Basic Package in addition to:

Scientific Coordination, Monitoring and Dissemination:

- · Support in funding negotiations, if required
- Advice and support for "Common Pot" agreements
- Coordination, support and management of all Programme activities
- Monitoring of programme activities
- Mid-term and final reporting and evaluation
- Targeted dissemination and promotion of scientific achievements

Networking, Integration of research projects within and across the programme:

- · Scientific Committee meetings for the overall scientific steering of the Programme
- Topical or science-policy oriented workshops
- Programme-wide conferences or programme-related open sessions at conferences for science synthesis and promotion
- Capacity-building through summer schools and short-term visits for junior researchers

The ESF Collaborative Research Tool Kit

Custom-made Package

According to needs in the short and long term:

Support may include any part of the standard package, plus additional support such as:

- Support in the definition of the Science Programme
- Targeting of the appropriate science communities
- Scientific match-making
- Community survey
- Policy-oriented activities
- Programme management aiming at "unconventional", or broadly interdisciplinary science
- Following specific procedures
- Planning of funding mechanisms
- Other requests, follow-up in the short and long terms?

Why choose the ESF Collaborative Research Took Kit?

The ESF offers you the support of their experienced international Science Officers and Administrators working in one central and independent office, hereby providing added value:

■ from a managerial point of view

- Uniform quality control and harmonised procedures across all disciplines
- Overall quality assurance by ESF
- Long-standing contacts to Science Officers in European national funding agencies and the European Commission

Costs and Contacts

The **cost** for the ESF Collaborative Research Tool Kit will depend on a number of variables, such as the package and options required, the number of proposals to be

- from a scientific point of view
 - Efficient synergy across different related National, European and international Programmes and initiatives
 - Integration with other national, European or international activities in the scientific domain or across scientific domains.

handled etc. Specific quotes will be provided by the ESF office upon request.

More information: www.esf.org/esf-toolkit or contact Svenje Mehlert at esf-toolkit@esf.org

Funding Organisations

Austria

Austrian Science Research Fund (EWF) Austrian Academy of Sciences (ÖAW)

Belaium

National Fund for Scientific Research (FNRS) Fund for Scientific Research - Flanders (FWO) Belgian Federal Science Policy Office (BELSPO)

Bulgaria Bulgarian Academy of Sciences (BAS) National Science Fund of Bulgaria (NSFB)

Canada

Social Sciences and Humanities Research Council of Canada (SSHRC)

Croatia

Croatian Academy of Sciences and Arts (HAZU) National Foundation for Science, Higher Education and Technological Development of the Republic of Croatia Rudier Boskovic Institute

Cvprus Cyprus Research Promotion Foundation (RPF)

Czech Republic Academy of Sciences of the Czech Republic (ASCR) Czech Science Foundation (GACR)

Denmark Danish Agency for Science, Technology and Innovation (FIST) (secretarial function for all 5 Danish Councils)

Estonia

Estonian Academy of Sciences (ETA) Estonian Science Foundation (ETF)

Finland Academy of Finland

France

National Centre for Scientific Research (CNRS) National Institute for Health and Medical Research (INSERM) Institute for Basic Research of the Atomic Energy Commission (CEA) Research Institute for Exploitation of the Sea (IFREMER) National Institute for Agricultural Research (INRA) French Research Institute for Development (IRD) Clinical Research Hospital Programme (PHRC)

Germany German Research Society (DFG) Max Planck Society (MPG)

Hungary Hungarian Academy of Sciences (MTA) Hungarian Scientific Research Fund (OTKA) Eoetvoes Lorand University

Iceland Icelandic Centre for Research (RANNÍS)

Ireland

Enterprise Ireland (EI) Irish Research Council for the Humanities and Social Sciences (IRCHSS) Irish Research Council for Sciences, Engineering and Technology (IRCSET) Marine Institute

Israel srael Science Foundation

Italy National Research Council (CNR)

Lithuania Lithuanian State Science and Studies Foundation

Kaunas University of Technology Luxembourg National Research Fund (FNR)

The Netherlands

Netherlands Organisation for Scientific Research (NWO) Netherlands Foundation for the Advancement of Tropical Research (WOTRO) Council for Life and Earth Science (ALW) Netherlands Organisation for Health Research and Development (ZonMw) Technology Foundation (STW)

Norway The Research Council of Norway (NFR)

Poland Polish Academy of Sciences (PAN) Ministry of Science and Higher Education Jagiellonian University (Marian Smoluchowski Institute of Physics)

Portugal Foundation for Science and Technology (FCT)

Romania National University Research Council (NURC) UMF "Carola Davila"

Russian Federation The A.P. Karpinsky Russian Geological Research Institute (VSEGEI)

Slovakia Slovak Academy of Sciences (SAV)

Spain Council for Scientific Research (CSIC) Spain - Ministry of Education and Science (MEC) Laboratory of Neuropharmacology, Univ Pompeu Fabra

Sweden Royal Academy of Letters, History and Antiquities (KVHAA) Swedish Research Council (VR) Swedish Council for Research in the Humanities and Social Sciences (HSER) Swedish Council for Working Life and Social Research (FAS)

Switzerland The Swiss National Science Foundation for the promotion of scientific research (SNF)

Turkey The Scientific and Technical Research Council of Turkey (TÜBITAK)

Ukraine Institute of Geophysics, National Academy of Sciences of Ukraine

United Kingdom

15 Arts and Humanities Research Council (AHRC) Biotechnology and Biological Sciences Research Council (BBSRC) Economic and Social Research Council (ESRC) Engineering and Physical Sciences Research Council (EPSRC) Medical Research Council (MRC) Natural Environment Research Council (NERC)

United States National Science Foundation (NSF)

Previously listed in other docs:

Denmark

Humanities Research Council (FKK) Medical Science Research Council (FSS) Natural Science Research Council (FNU) Social Science Research Council (FSE) Danish Research Council for Technology and Production (FTP) Royal Danish Academy of Sciences and Letters Danish National Research Foundation

Finland Delegation of the Finnish Academies of Science and Letters

Germany Helmholtz Association (HGF) Union of the German Academies of Sciences and Humanities

Greece National Hellenic Research Foundation (NHRF) Foundation for Research and Technology (FORTH)

Ireland Health Research Board (HRB) Royal Irish Academy (RIA)

Italy National Institute for Nuclear Physics (INFN) The Netherlands - Royal Netherlands Academy of Arts and Sciences

Norway Norwegian Academy of Science and Letters

Portugal Lisbon Academy of Sciences Portuguese International Relations Cabinet for Science and Higher Education (GRICES)

Slovakia Science and Technology Assistance Agency

Slovenia Slovenian Academy of Sciences and Arts Slovenian Science Foundation (SZF)

Sweden The Royal Swedish Academy of Sciences (KVA) Swedish Agency for Innovation Systems (VINNOVA) Swedish Council for Environment, Agricultural Sciences & Spatial Planning (FORMAS)

Switzerland Council of the Swiss Scientific Academies (CASS)

United Kingdom The British Academy (BA) Particle Physics and Astronomy Research Council (PPARC) The Royal Society

*Organisations (often University Institutes) which have participated in one specific EUROCORES Programmes. In many cases they have acted as "pilots" before the relevant National Funding Organisation started participating in the EUROCORES Programmes.

** Former Ministry of Science and Technology (MCYT) / Office for Science and Technology (OCYT)

** Former Icelandic Research Council (IRC)



The European Science Foundation (ESF) provides a platform for its Member Organisations to advance European research and explore new directions for research at the European level. Established in 1974 as an independent non-governmental organization, the ESF currently serves 75 Member Organisations across 30 countries.



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