



EUROCORES Programmes: there are currently 32 active EUROCORES programmes, many of which being interdisciplinary:



Medical Sciences

ECT - Pan-European Clinical Trials

is a unique programme that coordinates funding and management for pan-European, non-commercial, investigator-driven clinical trials.

- Addressing two rare forms of bone cancer in children
- Successful recruitment of more than 1000 patients across Europe
- Valuable training courses to exchange best practice for physicians, nurses and medical researchers from Europe and North America

EuroSTELLS - Development of a Stem Cell Tool Box

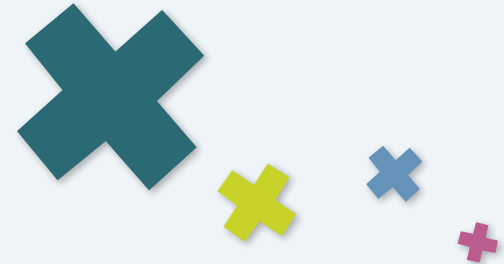
generates fundamental knowledge and implements common tools for stem cell research in Europe.

- Interdisciplinary workshops bringing together the wider community in stem cell research across Europe and the United States
- Supporting a task force of the International Society for Stem Cell Research (ISSCR) to develop valuable guidelines for the clinical translation of stem cells
- New findings published in top journals including *EMBO* and *Nature Biotechnology*

New programme

EuroSTRESS - Stress and Mental Health

investigates the impact of early life experience, genetic background and periods of repetitive stress on mental health disorders.



Humanities

TECT - The Evolution of Cooperation and Trading

explores new perspectives on the evolution of cooperation and trading, ranging from micro-organisms to humans assuming evolutionary continuity of cooperation.

- Highly interdisciplinary programme encompassing scientists from the humanities to life sciences
- Participation of NSF-funded scientists and members of the National Academy of Sciences as well as Nobel Prize winners
- First high-level results including a publication in *Science* on the analysis of costly punishment

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

uses the lens of history of technology to arrive at a cultural history of innovation processes.

- Analysis of history of Europe with a special focus on cultural activities and infrastructure developments in both Western and Eastern Europe
- Development of a dynamic Geographic Information System showing historical developments in Europe
- Co-design of the Exhibition "Gründerzeit/ Founding Period 1848-1871" at the German Historical Museum in Berlin
- Networking activities including a summer school with a unique political dimension involving Greek and Turkish scientists with media coverage in both countries

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

studies the circumpolar North using approaches of the humanities and social sciences.

- Shifting the perception of the North further north by involving indigenous populations
- Bringing together scientists from all areas of the circumpolar north (USA, Canada, Europe and Russia)
- The 2008 field season involved more than 40 researchers, students and members of the Cree community of Wemindji (James Bay) and the Yli-li community in Northern Finland
- Initiation of a regional museum project involving the local communities showing the results of the archaeological and paleo-environmental work



Humanities

CNCC - Consciousness in a Natural and Cultural Context

investigates the question whether the brain enables consciousness only in a broader context (the body, environment, society, etc).

- Highly interdisciplinary programme involving scientists from philosophy to the life sciences
- Many high-level publications, including monographs as well as articles in *Science* and *Nature*
- Introduction of "CNCC Essay Award for Junior Scholars"



OMLL - The Origin of Man, Language and Languages

looks into the development of linguistic and cognitive skills in the prehistoric past, exploring similarities between the distribution of genetic diversities and that of linguistic groups.

- Transdisciplinary programme crossing boundaries of science disciplines from archaeology and linguistics to computer sciences and genetics
- Major contribution to the reconstruction of ancient languages, understanding of bilingualism and communication in primate communities
- Numerous top-quality publications, including several articles in *Science* and *Nature*
- Several new research initiations including a new research project: the Spanish CONSOLIDER INGENIO 2010 programme for excellence in research: Bilingüismo y Neurociencia Cognitiva

New programmes

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

establishes a deeper understanding of intelligent interaction by letting logic in its modern guise act as a catalyst and a 'match maker' between the humanities, social and computational sciences.

EuroBABEL - Better Analyses Based on Endangered Languages

promotes research on under-described languages that aims at changing and refining our ideas about linguistic structure in general.



Social Sciences

European Collaborative Research Projects (ECRP I, II, III and IV)

supports researcher-led, collaborative international research within and across all fields of the social sciences.

- Offering opportunities to test innovative ideas, pooling multidisciplinary expertise
- 14 running Collaborative Research Projects in different areas of the social sciences
- Providing insight into new migration dynamics in Europe and political communication cultures in Europe among many other topics

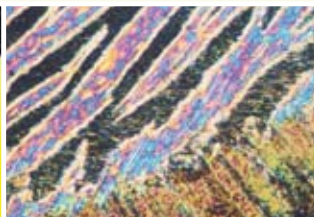
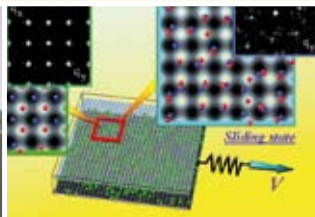
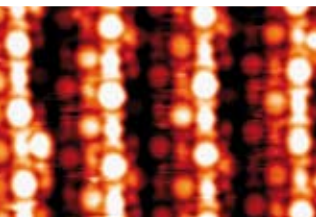
New programmes

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

undertakes theoretically oriented cross-national analyses of human behaviour and fundamental human values to understand how these are mediated and moulded by social institutions and practices.

EuroHESC - Higher Education and Social Change

promotes interdisciplinary comparative research into higher education institutions and their increasingly important role in times of globalisation and the "knowledge society".





Self-Organised Nanostructures (SONS 2)

examines super molecular interactions and self-assembled molecular architectures.

- Two European Young Investigator (EURYI) awardees
- Two European Research Council (ERC) awardees
- More than 500 publications
- Cross-disciplinary interactions with others EUROCORES programmes
- Several new interdisciplinary funding initiatives

Fundamentals of Nano-Electronics (FoNE)

contributes to creating the necessary knowledge for society in which microelectronics is gradually replaced by nanoelectronics.

- Pioneers of European graphene research
- Development of concepts to master the operation of nano-scale devices
- Training of young researchers through two schools of leading scientists

EuroQUAM - Cold Quantum Matter

provides vital opportunities for advancing the production and manipulation of cold quantum matter and establishes applications from high-precision measurement to quantum information.

- Engagement of top European research groups in the field of cold quantum matter to further establish international leadership
- Bringing theoreticians and experimentalists in close collaborations
- Providing unique educational and outreach opportunities in Europe
- Establishing links with similar networks in Canada and Australia

S3T - Smart Structural Systems Technologies

explores ways of turning conventional structures and materials into multifunctional, adaptive, and fault-tolerant systems.

- Maintenance and lifetime extension of civil engineering structures using advanced health monitoring systems, communications and decision making processes
- Research on ultra large, light-weight telescopes using membranes as reflecting materials
- Modelling, design and optimisation of morphing wings, i.e. controlled changes of a wing shape
- Advanced summer schools; specialised training courses; dissemination and publications e.g., journal special issue
- Strong collaboration with NSF-funded scientists including co-organisation of conferences, workshops and working group meetings

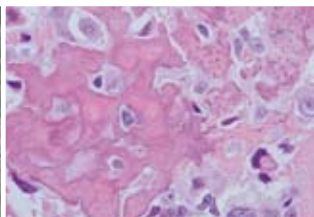
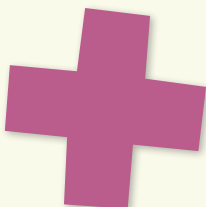
New programmes

FANAS - Friction and Adhesion in Nanomechanical Systems

concerns itself with the origins of friction and adhesion, aiming at reducing friction and thus reducing lubricants and energy consumption.

EuroQUASAR - European Quantum Standards and Metrology

advances the development of new generations of quantum standards and metrology applications with unprecedented performance.





EuroDYNA - Dynamic Nuclear Architecture and Chromatin Function

unravels the mysteries of the cell's control centre - the dynamics of nuclear architecture and chromatin function.

- Looking beyond a discipline - biologists and physicists from two different disciplinary EUROCORES look into new opportunities for collaboration
- Numerous high-level publications, including articles in *Nature* and *Cell*
- Over 15 scientific activities initiated across Collaborative Research Projects (CRP)
- Cross-CRP interactions have laid the foundation for joint publications and grant submissions

RNAQuality - Quality Control of Gene Expression - RNA Surveillance

deals with RNA molecules between function and flaw – a call for RNA surveillance mechanisms.

- Looking into quality-control systems developed by cells to ensure accurate operation
- Training of the next generation
- Bonding of peers in Europe and beyond through biannual conferences

EuroSCOPE - Science of Protein Production for Functional and Structural Analysis

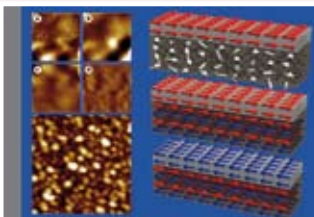
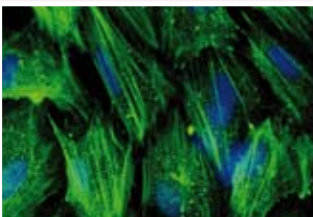
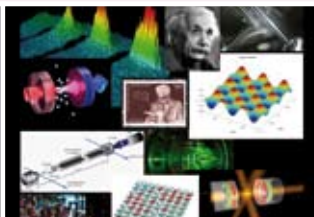
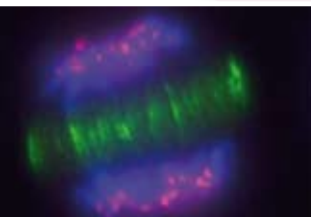
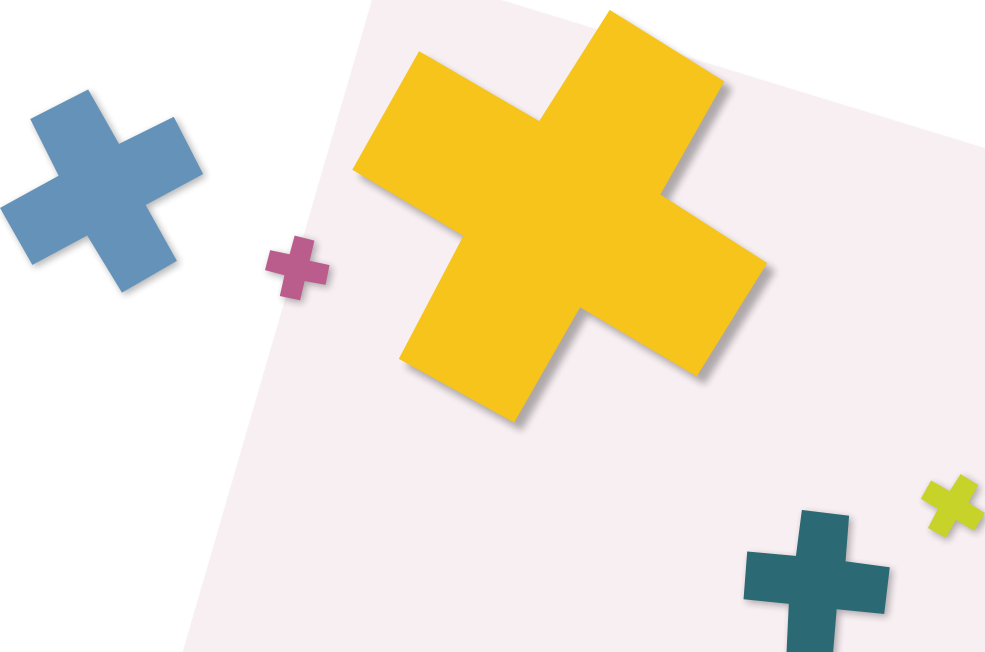
enhances research into overproduction of complex proteins to enable characterisation of structure and function of the building blocks of living organisms.

- Construction of engineered bacterial- and bacteriophage strains that allow overproduction of essential membrane proteins and other large proteins
- Three review articles in online magazine *Microbial Cell Factories* and more than 50 publications in other peer reviewed magazines
- Structural characterisation of viral proteins providing insights in early evolution of viruses, mechanisms of cell entry and subunit assembly, viral protein targeting and maturation
- Discovery of a novel class of chaperones in eukaryotic cells
- Bringing together critical mass by cross participation of teams in ESF and EC Framework Programmes

New programme

EuroMEMBRANE - Membrane Architecture and Dynamics

is an integrated approach towards elucidating the cellular membrane as gatekeeper and messenger between life and death.





EuroDIVERSITY - Challenges of Biodiversity Science

investigates ecological and social processes that drive biodiversity changes, in order to understand their impacts on ecosystem functioning and services as well as the societal responses to these changes.

- Applying principles of biodiversity research in practice, e.g. in grassland farming
- Bringing together more than 100 scientists from 20 countries
- Annual Programme Conference bringing together over 180 top-level scientists from the programme and other internationally leading experts
- Joint new collaborations between different Collaborative Research Projects resulting in new successful EU project proposals
- Supporting mobility and capacity-building of young scientists via training activities and exchange visits across Europe

EuroDEEP - Ecosystem Functioning and Biodiversity in the Deep Sea

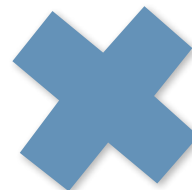
aims at describing, explaining and predicting variations of biodiversity within and between deep-sea habitats leading to changes in deep-sea ecosystem functioning.

- Joint cruises between the different projects
- Cross-project publications in prestigious journals in the field
- Supporting mobility of young scientists via exchange visits across Europe
- Collaboration with the Mediterranean Science Commission (CIESM) and planning of a major ESF-CIESM conference in 2010 as a platform with the petrol industry in the Mediterranean Region
- Strong linkages with EuroDIVERSITY

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

supports research addressing climate variability and particular its relationship to global carbon cycle dynamics.

- Leading to and supporting emerging scientific initiatives such as on ocean acidification, including policy recommendations
- Interactive DVD on the ESF, the EuroCLIMATE programme as a whole, and on the key results
- Participating in programmes aiming at helping high school teachers to better communicate the scientific results on climate change and the carbon cycle





EuroMinSci - European Mineral Sciences Initiative

draws together different experimental techniques and computational activities into interdisciplinary research projects addressing various aspects of mineralogy.

- New findings on components of the Earth's core lead to publication in *Science*
- Understanding magnetic properties of nanoscale microstructures made only possible through the first-time collaboration in this programme
- Breakthrough results on water in the asthenosphere as part of the Earth's mantle
- Providing young scientists with complementary training to ensure the success of cross-disciplinary projects
- 'Extreme conditions station' at PETRA III, Hamburg; alliance with the European Synchrotron Radiation Facility (ESRF), Grenoble

EuroMARC - Challenges of Marine Coring Research

is essential to boost European leadership in the planning of international marine coring activities.

- Strengthens the interactions between the projects dealing with different scientific topics but with a common technique, i.e. marine coring
- Supports the development of a pre- and post cruise science enabling programme
- Strong linkages to major international initiatives such as the European Consortium for Ocean Research Drilling (ECORD), the Integrated Ocean Drilling Programme (IODP) and the International Marine Past Global Change Study (IMAGES), benefitting the scientific community

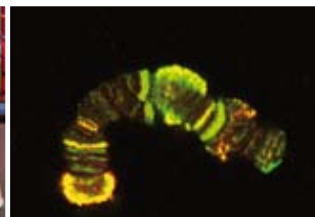
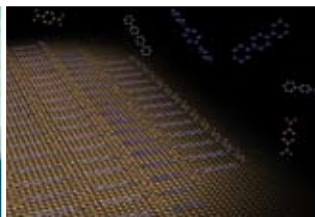
New programme

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

studies the impact of topography on society; not only in terms of slow landscape change but also in terms of how it affects climate.



(Programmes listed according to their scientific lead)



What is EUROCORES?

The EUROCORES (European Collaborative Research) Scheme is a flexible framework that promotes excellence in collaborative research and networking. Offered by the European Science Foundation, EUROCORES tackles scientific questions in and across all disciplines by means of an integrated European or even global effort.

Why EUROCORES?

EUROCORES is the only collaborative research instrument in Europe with a bottom-up approach covering all scientific disciplines, providing an exceptional opportunity for the science community to submit its own ideas. This accounts for the unique character of EUROCORES and distinguishes it from any other collaborative research activity.

How to participate?

Each year, there is an open call for EUROCORES theme proposals with a deadline in the beginning of June. After a theme selection process including a peer review, an open call for outline proposals within each EUROCORES programme is launched in December of the same year.

This means that the science community can both initiate EUROCORES programmes by proposing themes, as well as participate in collaborative research by responding to the calls of selected programmes in a second step.

For more information, please go to www.esf.org/eurocores

Until the end of 2008, scientific coordination and support for networking activities of scientists is funded through the EC FP6 Programme, under contract no. ERAS-CT-2003-980409. As of 2009, the funding for coordination and networking will be taken over by ESF and participating National Funding Organisations.

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 organisation, the ESF currently serves 77 Member Organisations across 30 countries.



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