

European Medical Research Councils (EMRC)

Editorial

The Grand Challenges of the future were among the items discussed at the Copenhagen Plenary meeting of EMRC in October. Professor Øjvind Lidegaard from the University of Copenhagen gave an overview of his background report about Climate Change and Health written for the World Medical Association meeting, held concomitantly in India.

Professor Marja Makarow, ESF Chief Executive, presented the strategic view for the European research area from the ERAB Board, *'Preparing Europe for a new renaissance'* and also the vision paper from EUROHORCs and ESF about the future of ERA. The two documents share the same vision: Strengthening science for society.

Professor André Syrota, President and Director General of Inserm, France, gave an update on the present developments of the medical research area in France and sketched a future with an even stronger focus on research in medicine in France.

Professor Roger Bouillon, our Core Group member from Leuven and Chair of the research evaluation panel of clinical medical research in Finland and Sweden, gave an update about this evaluation.

Professor Håkan Billig, Director of the Swedish Medical Research Council, gave the Swedish presidency perspective on the present status of medical research in Europe, including an update on the animal research directive.

Dr Elmar Nimmesgern from DG Research presented the Commission's view on present challenges for medical research in Europe. His talk was followed a few weeks later by the important workshop organised by DG Research (Health Directorate) on the strengthening of clinical medical research in Europe, where our ESF-EMRC Forward Look *'Investigator-Driven Clinical Trials'* was quoted widely and used as a backbone for discussion.

This workshop held by Dr Ruxandra Draghia-Akli and Dr Manuel Hallen included the participation of DG Health & Consumers and DG Enterprise & Industry, the latter being responsible for the clinical directive. Professor Silvio Garattini will write the workshop report that will be posted on the EMRC website when available.

During the EMRC Plenary meeting, Dr Mark Palmer, our Core Group member from the UK's Medical Research Council, presented a Health Research Classification System (HRCs). More about this can be read about on the second page of this Newsletter.

At the ESF Annual Assembly in late November 2009, strengthening the ESF-EUROHORCs relationship was discussed and a task-force was established to further prepare it. From the ESF our President Ian Halliday, Vice President Matthias Kleiner (DFG) and Chief Executive



Marja Makarow will collaborate with the EUROHORCs represented by Dieter Imboden (SNSF), Sir Leszek Borysiewicz (MRC) and Arnold Migus (CNRS).

The Chairs of the ESF Standing Committees had an interview with the Statutory Report Review Panel before the Assembly meeting and their report evaluating our work for the last five years is expected after Christmas. The interview process was a positive experience and we look forward to using the panel report in our future EMRC strategy work.

2009 has been a productive year for EMRC with a positive impact of our Forward Look on 'Investigator-Driven Clinical Trials', also quoted widely at the World Health Summit in Berlin. The future strategy of EMRC will be discussed at the Core Group meeting in Bruges (February 2010) where we will also work towards providing feedback to the task force dedicated to the strengthened ESF and EUROHORCs future.

Thank you to everyone involved in the EMRC work this year, Core Group, Standing Committee, Medical Sciences Unit, Experts, Advisors and ESF. We look forward to an exciting 2010 together.

Thank you to all of you and Best Wishes for a Happy New Year 2010 with health and happiness for you and your families and professional achievements for the benefit of science and society!

Lotte



Professor Liselotte Højgaard,
MD DMSc
EMRC Chair

Editorial

Health Research Classification System for Europe

How can all of us who have an interest in supporting biomedical research in Europe make more informed strategic decisions about what science to invest in? And at the same time how can we better demonstrate the impact of health research to governments when there is increasing pressure on research budgets?

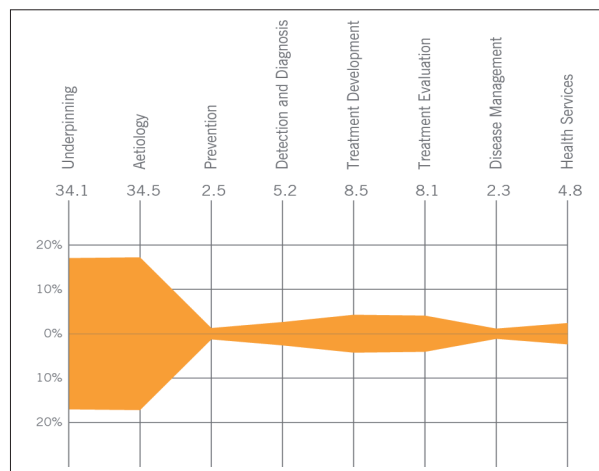
At the October EMRC meeting it was agreed that part of the answer would be to have a more systematic and common classification system for European research portfolios. A Health Research Classification System (HRCS) originally developed in the UK is now being taken up by a number of member states. HRCS is a system for classifying and analysing all types of biomedical and health-related research. It is designed to answer strategic questions about investment across the broad spectrum of different research activities in different areas of health and disease funded by different agencies. Use of this single stable common classification system allows meaningful comparisons to be made within and between different research portfolios and allows funding trends to be monitored over time.

A website called HRCS Online (www.hrcsonline.net) has been developed to explain the HRCS and to provide ongoing support for users of the system at all levels.

EMRC members agreed to take forward a Science Policy Briefing that would develop the HRCS concept alongside a more coordinated approach to research evaluation. EMRC will thus take a central role in ensuring that there is a consistency and quality control over the take-up and development of this important tool across member states and the European Commission.

Dr Mark Palmer

EMRC Core Group member (MRC, UK)



Kite diagram showing the combined total spend by research activity by 11 UK funding agencies, charities and health departments 2004-2005.

Highlights

Exploratory Workshops

Bionanotechnology

31 August – 2 September 2009, Sintra, Portugal

Bionanotechnology is an emerging interdisciplinary field at the interface of Nanotechnology and Biotechnology. Advances at this interface are already being developed with applications in sensing and diagnostics for medicine and therapeutics predicted for the coming years.

The Exploratory Workshop on 'Development and Application of Principles of Nano- and Bio-Sciences to Sensing, Diagnostics & Therapy' was convened by Professor Lynch (University College Dublin, Ireland) and Professor Franco (Universidade Nova de Lisboa, Portugal), and attended by 27 scientists from twelve ESF countries and one non-ESF country. Due to its interdisciplinary nature, the workshop was a joint activity with two other ESF Standing Committees (LESC, PESG). Talks were organised around five themes, each introduced by a keynote speaker who facilitated lively discussions at the end of each session.

Three conclusions emerged on future directions: 1) increased funding is needed in basic studies of bio and non-bio interactions from the physico-chemical stand point, with consideration of toxicological implications; 2) reference *in vivo* models need to be developed to study nanoparticle-cell interactions; 3) diagnostic assay kits need to be developed that would be point-of-care, low-cost, quick and requiring non-expert minimal manipulation.

More information:

www.cbni.eu/sections/ProjectsFunding/

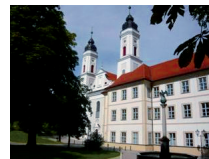
Bionanotechnology-Sintra

www.esf.org/activities/exploratory-workshops/life-earth-and-environmental-sciences-lesc/workshopsdetail.html?ew=7796

Research Networking Programmes

ERNI-HSF

13-15 September 2009, Irsee, Germany



The ESF Research Networking Programme on 'European Research Network for Investigating Human Sensorimotor Function in Health and Disease' (ERNI-HSF) sponsored a 2-day international workshop entitled 'Computational Principles of Sensorimotor Learning'. This was held in the spectacular conference facilities provided by the Monastery Kloster Irsee, near Munich. About 80 participants including 12 invited speakers were treated to excellent talks and some lively poster sessions. With the financial support of the ESF, 22 students or junior research fellows were given bursaries to offset their costs.

Presentations were grouped into four themes: Adaptation, Variability and Uncertainty, Reinforcement Learning and Optimality, and Discovering Structure. Overall the meeting was felt to be a great success, and its primary aim of introducing European research scientists to the cutting edge of work in computational neuroscience and robotics was surpassed.

More information: www.esf.org/erni-hsf

REMEDIC

8-10 October 2009, Bertinoro, Italy



The 'Stem Cells for Bone Regeneration' workshop, organised by Professor Baldini (University of Bologna and Istituti Ortopedici Rizzoli, Italy) was sponsored by the European Science Foundation and co-sponsored by the European Orthopaedic Research Society. This workshop was strongly dedicated to young scientists, 40 of them being present out of 60 participants. Twenty PhD students and post-docs benefitted from ESF travel grants. The workshop was a nice combination between keynote speakers' lectures from senior researchers and clinicians and oral presentations by young scientists.

Different aspects of bone biology were covered with specific topics like 'Biomechanical aspects in the development of bone tissue engineering' or 'Mesenchymal stem cells as treatment of graft-versus-host disease' to broader subjects like 'Tooth repair and formation using stem cells: lesson from embryogenesis' and 'Stem cells for bone regeneration: is there hope or is it all hype?'.

More information: www.esf.org/remedic

FUMINOMICS

22-25 October 2009, Nouan-le-Fuzellier, France



FUMINOMICS' aim is a multidisciplinary and integrated functional genomics approach of host cell infection mechanisms in *Aspergillus fumigatus* (*Af*). Understanding how the fungal pathogen perceives and adapts to its host environment requires fundamental research into gene expression and regulation.

The major achievement of this meeting was the management of all data and protocols recently developed by the *Af* transcriptomic and proteomic research community. Topics discussed included the validation of the *Af* Biochip that will be used on all FUMINOMICS partner's samples by the Toulouse genopole; proteomic methodologies developed and adapted for *Af*; transcriptomic and genomic *Af* data collection in a common OmniFung data warehouse (our website now provides *Af* transcriptomic and proteomic data bioinformatics tools with a quick and easy database access interface).

This second annual meeting offered the opportunity for junior scientists to present their research data in transcriptomic, proteomic and genomic analysis. A strategic workshop sponsored by ESF will be organised in 2010 with the aim to define the future in the construction of an *Af* comprehensive mutant library. The next annual meeting will be held in summer 2010 and will focus on cell biology, biochemistry and the need for development of biochemical and imaging technologies.

More information: www.esf.org/fuminomics

EUROCORES

EuroSTRESS

6-13 September, Rhodes, Greece



It has been known for some time that experience-related factors and cognitive inputs have a lasting impact on brain function and behaviour. In recent years, however, the underlying mechanisms have become much better understood. Exciting new evidence demonstrates that genetic inputs can be modified and that stress hormones powering the lasting influence of the environment are extremely important for this purpose. The PENS Summer School focused on the mechanism underlying the programming effects of early experience on brain circuitry, which underlies emotional and cognitive processes in coping with stress during the lifespan.

This Summer School on 'Neurodevelopment Programming and Phenotypic Plasticity: Implications for Stress, Ageing and Health' was chaired by EuroSTRESS Project Leader Professor de Kloet (Leiden University, The Netherlands). The School was co-sponsored by ESF, the EU-Lifespan consortium, the Programme of European Neuroscience Schools (PENS) and the Royal Netherlands Academy of Arts and Sciences.

The objective was to train 40 PhD students and young post-docs in concepts from gene and neural circuitry to neuroendocrine regulation and behaviour with a translational perspective. The School was of great interest to EuroSTRESS members who presented their work, as "mechanism" was the original basis of the EuroSTRESS Programme.

More information: www.esf.org/eurostress

RNAQuality

Mid-Term Report

RNAQuality is the EUROCORES Programme that aims to uncover processes that act as quality control checkpoints in gene expression and understand how these function at a molecular level. Sixteen research groups from nine European countries participate in RNAQuality and have been very active in organising and participating in the Programme networking activities. RNAQuality has also been active beyond its boundaries, forging links with another EUROCORES Programme, EuroDYNA.

RNAQuality has already produced a number of high-level publications, including articles in *Nature* and *Cell*, and the cross-CRP and cross-EUROCORES interactions have successfully laid the foundation for joint publications and possible grant submissions.

It therefore does not come as a surprise that the Evaluation Panel rated the Programme as excellent in terms of scientific achievements and networking, training and dissemination activities.

More information: www.esf.org/rnaquality

Events 2010

- **EMRC Core Group meeting**
4-5 February, Bruges, Belgium
- **2nd Workshop on the Role of Fathers in Cohort Studies**
RNP EUCCONET
24 February, Vienna, Austria
- **3rd Workshop on Data Management**
RNP EUCCONET
9 March, Bristol, United Kingdom
- **4th Conference on Functional Genomics and Disease**
RNP FFG (Frontiers of Functional Genomics)
14-17 April, Dresden, Germany
- **B Cells and Protection: Back to Basics**
ESF-EMBO Symposium
18-23 April, Sant Feliu de Guixols, Spain
- **EMRC Core Group & 56th Plenary meetings**
21-23 April, Berlin, Germany
- **Workshop on the Role of Insular Cortex**
RNP ERNI-HSF
29 April – 2 May, Granada, Spain
- **Antiviral Applications of RNA Interference**
ESF- EMBO Symposium
30 May-4 June, Sant Feliu de Guixols, Spain
- **Pharmacogenetics and Pharmacogenomics: Practical Applications in Routine Medical Practice**
ESF-UB Conference in Biomedicine
6-11 June, Sant Feliu de Guixols, Spain
- **3rd Steering Committee and Workshop**
RNP REMEDIC
12 July, Vienna, Austria
- **7th World Congress on Stress**
EUROCORES EuroSTRESS
25-27 August, Leiden, The Netherlands
- **Conference on Bone Morphogenetic Proteins**
RNP REMEDIC (co-sponsor)
15-18 September, Leuven, Belgium
- **International Conference on the Parietal Lobe Function**
RNP ERNI-HSF
20-21 September, Amsterdam, The Netherlands
- **Emergent Properties of the Cytoskeleton: Molecules to Cells**
ESF- EMBO Symposium
3-8 October, Sant Feliu de Guixols, Spain
- **EMRC Core Group & 57th Plenary meetings**
11-13 October, Strasbourg, France
- **Functional Neurobiology in Minibrains: From Flies to Robots and Back Again**
ESF- EMBO Symposium
17-22 October, Sant Feliu de Guixols, Spain
- **Nanomedicine: Imaging, Diagnostics, Devices and Biosensors**
ESF-UB Conference in Biomedicine
23-28 October, Sant Feliu de Guixols, Spain
- **Molecular Perspectives on Protein-Protein Interactions**
ESF- EMBO Symposium
21-26 November, Sant Feliu de Guixols, Spain

ESF

The European Science Foundation (ESF) is an independent, non-governmental organisation, the members of which are 80 national funding agencies, research-performing agencies, academies and learned societies from 30 countries.

The strength of ESF lies in the influential membership and in its ability to bring together the different domains of European science in order to meet the challenges of the future.

Since its establishment in 1974, ESF, which has its headquarters in Strasbourg with offices in Brussels and Ostend, has assembled a host of organisations that span all disciplines of science, to create a common platform for cross-border cooperation in Europe.

ESF is dedicated to promote collaboration in scientific research, funding of research and science policy across Europe. Through its activities and instruments ESF has made major contributions to science in a global context. The ESF covers the following scientific domains: Humanities; Life, Earth and Environmental Sciences; Medical Sciences; Physical and Engineering Sciences; Social Sciences; Marine Sciences; Materials Science; Nuclear Physics; Polar Sciences; Radio Astronomy; Space Sciences.

EMRC

The European Medical Research Councils (EMRC) is the membership organisation for all the medical research councils in Europe under the auspices of the ESF. EMRC's mission is to promote innovative medical research and its clinical application towards improving human health. EMRC offers authoritative strategic advice for policy making, research management, ethics and better health services. In its activities, EMRC serves as the voice of its Member Organisations within the European scientific community. EMRC disseminates knowledge and promotes the socio-economic value of medical research to the general public and decision makers.

Contributors to the EMRC Newsletter

EMRC Chair

- Professor Liselotte Højgaard, EMRC Chair and Director, Professor Clinical Physiology, Nuclear medicine & PET, Rigshospitalet, University of Copenhagen and Technical University of Denmark (DK)

Medical Sciences Unit

- Dr Stephane Berghmans, Head of Unit
- Dr Maria Manuela Nogueira, Science Officer
- Dr Ayse Ulgen, Junior Science Officer
- Ms Janet Latzel, Unit Coordinator
- Ms Blanche Facchini, Administrator
- Ms Nicole Stirnberg, Administrator

Life, Earth and Environmental Sciences Unit

- Mr Paul Beckers, Science Officer