

European Medical Research Councils (EMRC)

Editorial

Over the summer, our Chair took over the position of Chair of the FP7 Health Science Advisory Board following in the footsteps of Professor Sir Leszek Borysiewicz from the Medical Research Council in London, who recently stepped down as he has been appointed Vice-Chancellor of the University of Cambridge. From EMRC we would like to offer our congratulations to Sir Leszek for this impressive new position at Cambridge.

The Framework Programme Health has decided for the coming years to prioritise clinical research with an increase in funding of 30%. This is a major achievement for EMRC as it could be read as a consequence of our Forward Look report on 'Investigator-driven clinical trials'. Without boasting too much we could probably also give credit to the Forward Look as one of many factors behind the European Commission's decision to revise the clinical trial directive from 2001. In preparation of this revision, EMRC was invited to have a series of technical meetings with the European Commission to discuss topics of importance to the academic community.

Our Position Paper on MRI entitled '*EMRC position on the implications of the EMF Directive (2004/40/EC) for European Biomedical Magnetic Resonance Research*' was published last June. It strongly supports the exemption of MRI from any limit values as an acceptable and responsible solution for the research and clinical use of MRI without any hazard for patients or staff. This position paper will hopefully have a large and positive impact on the

that permitted under existing legislation. The Directive must now be implemented by the member states into national law within the next two years. Constant and effective advocacy by the ESF-EMRC with the scientific community, industry, funders, medical charities and patient groups has achieved many significant improvements over the 2008 draft. At the European level, the involvement of the academic sector and of scientific organisations allowed for the development of a better and more balanced Directive. In addition, scientific organisations are now better organised and better prepared for the national implementation. EMRC will publish a follow-up to its original position paper to provide an update on the newly voted Directive and more importantly anticipate future issues linked with the Directive's implementation in member states.

This autumn the EMRC plenary meeting will be held at the Council of Europe in Strasbourg with a mini-symposium organised to discuss medical research in the United States, Canada, Australia and New Zealand in addition to the United Kingdom. We are very much looking forward to this grand occasion as we will be hosting guests from medical research councils of these countries. In the same prestigious location and following the plenary, we will hold the consensus conference for the Forward Look on '*Implementation of medical research in clinical practice*' where numerous participants from inside and outside Europe are expected for a lively discussion on this very important and hot topic. Several contentious areas will be debated such as who should write clinical guidelines, is it for example organisations such as NICE in the UK or medi-

cal doctors. This is probably one of the most difficult questions but topics such as patients' involvement or open access will certainly be deliberated. We look forward to seeing you at the events and kindly ask you to look at the information below for use in each of your organisations and countries. Hoping you have had a nice summer, we are now looking forward to interesting autumn and winter seasons.

Lotte

Professor Liselotte Højgaard, MD DMSc
EMRC Chair

Stephane

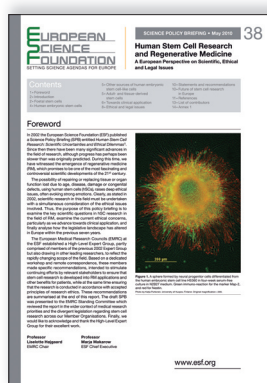
Dr Stephane Berghmans, DVM PhD
Head of Unit

Foreword	1
Contents	2
Background	2
Objectives	2
Principles of EMF	2
EMF in MRI	2
Why is EMF important for research?	2
What are the challenges for research?	2
What are the solutions?	2

future development of MRI in Europe. I would like to take this opportunity to thank Dr Elena Martin-Bautista, our Visiting Junior Science Officer, who recently had to leave our EMRC unit. She provided excellent work through her secondment year and particularly on this position paper.

In June, our Science Policy Briefing on '*Human Stem Cell Research and Regenerative Medicine – A European perspective on scientific, ethical and legal issue*' was also published. Both publications have already been cited and covered in numerous media and more can be learned in this Newsletter (see *Highlights*).

On 8 September 2010, the revised Directive on the protection of laboratory animals has completed its passage through the legislative system by a second reading vote in the EU Parliament. The general view is that the Directive is a political compromise that will continue to allow responsible research involving animals similar to



Highlights

Science Policy

Human Stem Cell Research and Regenerative Medicine: A European perspective on the scientific, ethical and legal issues

Regenerative medicine promises to be one of the most fascinating and controversial scientific developments of the 21st century. In this medical field, human embryonic stem cells could be applied in a variety of ways, for example to identify new compounds for drug development, or as cell-based therapies for treatments. The potential to use human stem cells to repair or replace tissue or organ functions lost through age, disease, damage or birth defects, raises strong ethical issues that must be considered integrally with any research. The different ethical or religious beliefs in individual countries in Europe means each has different policies for human stem cell research, and some are not willing to develop human stem cell-based therapies.

A new EMRC report examines the key scientific questions for human stem cell research in the context of the rapidly emerging field of regenerative medicine. It explores the current ethical concerns, particularly with clinical application, and analyses how the legislative landscape has altered in Europe within the previous six years.

ESF-EMRC Position on the Implications of the EMF Directive 2004/40/EC for European Biomedical Magnetic Resonance Research

The European Commission's Electromagnetic Fields (EMF) directive limits the exposure of workers to EMF with frequencies in the range of zero to 300 GHz. These limits are based on sparse evidence and are so low they could prevent MRI research, and severely hinder further development of the technology for patients with life-threatening diseases. The EMF directive will come into effect in April 2012. The exposure limits would impair the ability of healthcare staff to care for patients, such as children, the elderly or those who are anaesthetized, who need help or comfort during scans. They would prevent the use of MRI for interventional and surgical procedures, emerging techniques that provide better clinical information and avoid the use of ionising radiation for imaging. Finally, by curtailing cutting edge research in the field of MRI, they would deny patients innovative treatments in the future.

Europe must act to prevent new legislation impeding the use of magnetic resonance imaging (MRI) in medical research, diagnosis and treatment, states our new report. Besides the report is endorsed by the EMRC, representing the medical research communities in 30 countries, and it recommends an exemption from any limit values for MRI in clinical and research settings, allowing researchers to manage health and safety requirements through other measures.

Exploratory Workshops

Manipulation of Biomaterials Surface By Plasma Processing

PESC-EMRC, 26-30 May 2010, Iasi, Romania

From implants and fibres for surgery to biosensors in medical devices or bags for blood transport, biomaterials are involved in all stages of a disease from diagnostic to therapy. Biomaterials must have mechanical and physicochemical properties to complement the restrictive conditions of these diverse medical applications. Their surface biocompatibility is unfortunately often poor with alteration of the physiological environment leading to infection, inflammation, thrombosis formation or carcinogenesis.

The 26 participants to this 3-day workshop hosted by Alexandru Ioan Cuza University of Iasi in Romania (26-30 May 2010) explored the importance of these surface properties and the unique role plasma technology can play as a precise and selective method for their modification in order to be used in a biological environment. The workshop brought together researchers with expertise in physics, chemistry, medicine and materials science to build a network with a common goal: investigate the benefits of plasma processing on biomaterial surfaces and how its use can be improved for medical applications.

Research Networking Programmes (RNP)

European Network for Gastrointestinal Health Research (ENGHIR)

The 1st Steering Committee of the Research Networking Programme ENGHIR "European Network for Gastrointestinal Health Research" was held in Strasbourg (France) on 31 May 2010, chaired by Dr Severino Pandiella (University of Manchester, UK). This Network aims to bring together a wide spectrum of scientists and professionals to share their knowledge and expertise in addressing current challenges and issues related to the production and validation of gut health promoting foods. A first workshop will be held on 15-16 February 2011 in Braga (Portugal).

More information: www.esf.org/enghir

European LeukemiaNet (ELN)

Treatment of leukemias has emerged as one of the most challenging areas in oncology. As leukemia therapy is complex, networking offers synergy effects and problem-solving potential. ESF-ELN, the ESF European LeukemiaNet follows the 6th EU Framework Programme funded ELN network for research, treatment and diagnostics in the field of leukemia. The aim of the network is to make leukemia a curable disease. It was officially launched on 1 July 2010 in Mannheim (Germany) at the occasion of its First Steering Committee meeting.

More information: www.esf.org/esf-eln

European Myositis Network (EUMYONET)

The inflammatory myopathies, collectively named myositis, are rare chronic disorders with muscle weakness as the primary clinical complaint. Disease mechanisms are largely unknown but genetic factors contribute to disease susceptibility. The aim of this network is to establish an interdisciplinary network in order to share knowledge and expertise in various scientific fields of adult and juvenile myositis, and to establish a European myositis data base with longitudinally followed patients and a biobank with DNA, serum samples and muscle biopsies.

EUMYONET was officially launched on 27 May 2010 in Strasbourg (ESF Headquarters) during its first Steering Committee meeting. A first workshop will be held on 14-15 December 2010 in Prague (Czech Republic).

More information: www.esf.org/eumyonet

The European Child Cohort Network (EUCCONET)

A workshop on "Data Management", organised by Dr Wenche Nystad (Steering Committee member, Norway) and Dr Andrew Boyd (UK) took place on 9-10 March 2010 in Bristol (UK), and the workshop on "Tracking sample members in longitudinal studies", organised by Dr Lisa Carlderwood (UK) took place on 1-2 July 2010, London (UK).

More information: www.esf.org/eucconet

EUROCORES

EuroSTRESS

On 25 August 2010 a "EuroSTRESS Day" was organised by Professor E. Ronald de Kloet (Project Leader of BALANCE, Netherlands) at the Gorlaeus Laboratory in Leiden (NL). It included the Scientific Committee meeting of EuroSTRESS. This event was followed by the 7th World Congress on Stress on 25-27 August 2010 which included three EuroSTRESS symposia, the Chairs and Speakers of which were EuroSTRESS Project Leaders or Principal Investigators.

More information: www.esf.org/eurostress

Events 2010

- **Conference 'European Meeting on Next Generation Sequencing'**
RNP Frontiers of Functional Genomics
27-30 September 2010, Leiden (Netherlands)
- **Workshop 'Spatiotemporal Dynamics of Cell Signalling'**
RNP Frontiers of Functional Genomics
30 September - 3 October 2010, Oslo, Norway
- **Conference 'From Science Fiction to Science Fact: What's Next'**
RNP Frontiers of Functional Genomics
30 September - 3 October 2010, Heidelberg, Germany
- **Emergent Properties of the Cytoskeleton: Molecules to Cells**
ESF-EMBO Symposium
3-8 October 2010, Sant Feliu de Guixols, Spain
- **Third Scientific Workshop on 'Cell Biology and Biochemistry'**
RNP FUMINOMICS
7-8 October 2010, Paris, France
- **EMRC Core Group & 57th Plenary Meetings**
11-13 October 2010, Strasbourg, France
- **Consensus Conference**
Forward Looks, 'Implementation of Medical Research into Clinical Practice'
14 October 2010, Strasbourg, France
- **Functional Neurobiology in Minibrains: From Flies to Robots and Back Again**
ESF-EMBO Symposium
17-22 October 2010, Sant Feliu de Guixols, Spain
- **Strategic Workshops**
Forward Looks 'Gene Environment Interaction in Chronic Disease'
19-22 October 2010, Barcelona, Spain
- **Second Steering Committee meeting**
RNP BIOLUPUS
22 October 2010, Strasbourg, France
- **Nanomedicine: Reality now and soon**
ESF-UB Conference in Biomedicine
23-28 October 2010, Sant Feliu de Guixols, Spain
- **Second Review Panel meeting (ranking meeting)**
EUROCORES EuroEPINOMICS
25 October 2010, Strasbourg, France
- **Conference 'Medical Genome Sequencing, Understanding the Genomes of Diseases'**
RNP Frontiers of Functional Genomics
28-30 October 2010, Barcelona, Spain
- **Multidisciplinary Consortium for the Development of Effective, but Non-toxic Drugs against MDRTB and XDR-TB**
ESF Exploratory Workshop
10-12 November 2010, Lisbon, Portugal
- **Third Steering Committee meeting and 9th Annual Meeting of the European Network for the Study of Adrenal Tumours (ENS@T)**
RNP ESF-ENS@T
24-27 November 2010, Torino, Italy
- **Molecular Perspectives on Protein-Protein Interactions**
ESF- EMBO Symposium
21-26 November 2010, Sant Feliu de Guixols, Spain

ESF

The European Science Foundation (ESF) is an independent, non-governmental organisation, the members of which are 79 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 promoting 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 and Engineering; 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

- Stephane Berghmans, Head of Unit
- Maria Manuela Nogueira, Science Officer
- Kirsten Steinhausen, Science Officer
- Nathalie Spielesoy, Junior Science Officer
- Elena Martin-Bautista, Visiting Junior Science Officer
- Janet Latzel, Unit Coordinator
- Blanche Facchini-Schaller, Administrator
- Nicole Stirnberg, Administrator

Life, Earth and Environmental Sciences Unit

- Paul Beckers, Science Officer
- Lars Kristiansen, Science Officer