Editorial

Another year gone, another series of great achievements for EMRC! Like the EUROCORES programme that Dr Réthelyi kindly accepted to tell us about in his guest editorial.

Two Forward Looks have been published this year. The first on the ‘Implementation of medical research in clinical practice’ was launched in May. Its 10 recommendations are now in their implementation phase as dedicated working groups are formulating concrete ways forward. The second Forward Look on ‘Gene-environment interaction in chronic disease’ has just been published in open access in the Journal of Allergy & Clinical Immunology to achieve the greatest impact.

Science policy has also been a large focus in 2011 as three position papers and one science policy briefing supported our work. A position paper on the Directive on the protection of laboratory animals concluded this advocacy success story. Another paper on European Biobanks and sample repositories was produced by the ongoing Forward Look on personalised medicine. The last position paper of the year was released in December to tackle the Clinical Trials Directive as a draft Directive is to land in front of MEPs in 2012. Finally a policy briefing on health research classification systems was released in November during its implementation event. All these publications are available on the EMRC website at www.esf.org/publications/medical-sciences.

Let us also mention our landmark second EMRC white paper entitled ‘A stronger biomedical research for a better European future’, launched in September as we celebrated EMRC’s 40th Anniversary (story on the next pages).

This high-impact year is a tribute to an active EMRC but all the credit goes to your hard work. The high quality of EMRC in 2011 is homage to the core group, the standing committee, the unit staff, experts, participants and all those dedicated to a stronger biomedical research for a better future. Thank you! We hope to count on you in 2012, an important year that will see EMRC transition from ESF to Science Europe.

We wish you and your families a heartfelt happy New Year 2012 with good health for all and great success in your professional endeavours.

With kind regards,
Lotte and Stephane

Professor Liselotte Højgaard,
MD DMSc
EMRC Chair

Dr Stephane Berghmans,
DVM PhD
Head of the Biomedical Sciences Unit

Guest Editorial

How do early experiences shape our vulnerability to stress in adulthood?

The mismatch hypothesis of psychiatric disease: Final event of the EuroSTRESS Programme, 11-13 May, Groningen, The Netherlands.

Early life and childhood traumatic experiences are associated with higher rates of depression, anxiety disorders, and psychosis. This statement is widely agreed upon by experts. What the exact molecular pathways are that convey these changes, and how these findings can be modelled are much more difficult questions. Also, how could these findings be translated to prevention? The EuroSTRESS EUROCORES Programme was launched in 2008 to create a collaborative network for synthesising the manifold initiatives in European stress research. The collaborative research projects of the scheme brought together researchers from the fields of behavioural neuroscience, endocrinology, genetics, epidemiology, and health psychology. The final event of these efforts was a symposium organised by Esther Nederhof (University Medical Centre, Groningen University, NL) where 42 researchers from 9 European countries and the USA came together to present their findings and to discuss the arising questions.

On the first day of the symposium the theoretical concept of the mismatch hypothesis was introduced as questions to be addressed during the symposium. This was followed by lectures on the adaptational theory of stress, on animal models and epigenetic research, and how these could shape future research. These presentations gave an excellent overview about the most recent advances in research on the hypothalamic-pituitary-adrenal axis, and the actions of glucocorticoids and mineralocorticoids on learning, cognition and social behaviour. On Day 2 the participants turned to child psychology and epidemiological research. Findings showed the complexity of how children react to different environments, and how this exerts its effect later in adulthood. In particular, it was amazing to learn from Seth Pollak how much we know already about the development of children subject to adversities such as abusive environments, or being in orphanages.

EuroSTRESS has now officially come to an end, but we felt that it was more of a beginning for several new projects. In his lecture, guest speaker Bruce Ellis, called for the creation of a European-American network on multidisciplinary stress research as collaborative efforts and good research are needed in this field. Besides several bilateral collaborations which will continue, the Erice School of Ethology on “Conceptual issues in stress research” took place in Sicily in November. And for those who wish to know more about EuroSTRESS, the final report is now out and available on the EMRC webpage.

Dr János Réthelyi
EMRC Standing Committee member
40th Anniversary of EMRC

On the sunny auspicious day of 29 September we celebrated EMRC’s 40-year anniversary in Strasbourg. Hosted by the European Directorate for the Quality of Medicines & HealthCare of the Council of Europe, the event was attended by a crowd of EMRC member organisation representatives, present and past standing committee members, former EMRC Chairs and Heads of Unit, and European and international stakeholders such as the European Commission and the US National Institutes of Health (NIH).

EMRC’s history was celebrated as some of its most important accomplishments were highlighted. Professor Liselotte Højgaard, Chair of EMRC, first provided an overview of EMRC’s creation in her home town of Copenhagen in 1971 by representatives from medical research councils and funding organisations from Denmark, Finland, (West) Germany, Norway, Sweden and the United Kingdom. This meeting was also attended by international observers from the NIH and the World Health Organisation.

Professor Philippe Lazar, former EMRC Chair, then delivered an interesting reflection on his past experience at EMRC and Inserm. He also made a provocative proposal that he thinks would enhance collaborative research in Europe: he calls for all travel to be free of charge for researchers... an idea for follow-up.

The future of EMRC was also discussed as personalised medicine, more precise diagnostics and better treatments will emerge from biomedical science and its transfer into clinical practice. Similarly, the role of medicine and genetics in rare diseases is set to come to the fore and EMRC will be at the vanguard of addressing the scientific, medical and ethical issues that arise. Core group members Professors Martin Röllinghoff and Josef Syka presented the outcome of the Forward Look on gene-environment interaction in chronic disease and the ongoing strategic work on open access in biomedical research which they are respectively chairing. Dr János Réthelyi from our standing committee introduced a new ESF neuroscience initiative on the human brain in which he represents EMRC. Progress of the Forward Look on personalised medicine was reported by Professor Krešimir Pavelic, another EMRC member. The EMRC office also participated with Drs Kirsten Steinhausen and Maria Manuela Nogueira providing updates on key policy issues relevant to biomedical research.

Finally Dr Joaquin Casariego, Director of CAIBER (Spanish Clinical Research Network), wrapped the celebration emphasising EMRC’s important work in the current global health context.

Given the high-level audience attending the 40th anniversary celebration, it was the perfect occasion to release the second EMRC White Paper. This document entitled ‘A Stronger Biomedical Research for a Better European Future’ follows and updates our first white paper published in 2007. It analyses the current state of biomedical research within Europe compared with its international collaborators, together with an assessment of new challenges faced in Europe, including changing patterns of diseases, ageing populations and the growing cost of healthcare.

Professor Højgaard in her introduction said, “We believe that this white paper presents a powerful case for the future strategy of biomedical research in Europe, which will benefit society in many ways and will improve the quality of life for the citizens of Europe and the rest of the world and meet the difficult challenges we are facing”.

To make a case for biomedical research in Europe, some of the authors presented key chapters like Professor Michael Stolpe from the Kiel Institute for the World Economy, on the status of biomedical research funding in these times of austerity. Dr Stephane Berghmans, Head of the Biomedical Sciences Unit, showed how Europe is well on its way to closing the publication gap with the United States. In this context, Mary Smolskis from NIH provided a perspective from her organisation and Professor Håkan Billig discussed the progress made since the first white paper of which he was an author as a former EMRC core group member.

Dr Thierry Damerval, Deputy Director of Inserm, offered his vision of how the white paper came about and why with EMRC, it is so important today for Europe. He said: “With investment in biomedical research yielding a return of 40% per year, adequate funding and best practice for biomedical research are not only essential to secure health and welfare in Europe and the rest of the world, but they also make sound economic sense”.

One of the main conclusions of the white paper is that European biomedical research is advancing at a great pace compared to the relatively small funds available. Five recommendations which should underlie future policy and strategy for biomedical research in Europe call for global collaboration and cohesion in biomedical research:
1. Citizens and patients should be closely engaged with biomedical research;
2. The results of biomedical research should be rapidly and efficiently brought to the patient;
3. Biomedical research should be conducted with high quality in an open, honest and transparent way;
4. European biomedical research should be conducted within a global context;
5. Investment should be increased to create the right world-class biomedical research.
**40th Anniversary of EMRC**

**1971-2011**

**Liselotte Højgaard**  
*EMRC Chair 2006-present*

Professor Liselotte Højgaard has been EMRC chair since 2006 and is currently Director of the Department of Clinical Physiology, Nuclear Medicine and PET, at Rigshospitalet in Copenhagen, Denmark, and Professor at the University of Copenhagen and the Technical University of Denmark. She explains the importance of EMRC:

“We need EMRC to secure collaboration, coordination and sharing of knowledge across Europe and with the rest of the world,” she says. “Science is global, but we here in Europe need to work together. EMRC has contributed to important research policy advice and research projects for the last 40 years, with proven outcomes.”

The EMRC is therefore as relevant today as it has been throughout its 40 year history. “The 2008 Forward Look ‘Investigator-Driven Clinical Trials’ has initiated a Global Science Forum under the Organisation for Economic Co-operation and Development (OECD) to improve conditions for clinical patient-oriented research in Europe and the rest of the world and for better international cooperation.” The Forward Look has actually changed the EC Framework Programme FP7 in health, so that now 30% of funding is for clinical research. Previously, funding in this area was much lower. “The Forward Look has led to a revision of the much-criticised European Clinical Trials Directive, so that it will be easier to do research in the future,” Højgaard adds.

Over the years EMRC has played major roles in shaping the future of biomedical research. Professor Højgaard highlights the great victory of the new EU Directive on the Protection of Animals used for Scientific Purposes from 2010. “With a strong and focused effort we, together with others, succeeded in getting a new directive accepted, allowing continued animal research in Europe with better conditions for research animals.”

Similarly, the EMRC White Paper from 2007 on strengthening biomedical research in Europe may have been partly responsible for the general improvement in funding and conditions for medical research in Europe in the coming years.

**Philippe Lazar**  
*EMRC Chair 1994-1996*

Post-genomic science was coming to the fore during former chair Philippe Lazar’s tenure, he reminds us, as well as molecular neurobiology in relation to neuropsychiatric and degenerative disorders and immunology, including histocompatibility; those were the big issues facing biomedicine at the time. Ethical issues were also at the forefront of discussions he adds.

“At this time, we were still far from the present 27 members of the European Community,” Lazar says, “But, EMRC included several European countries that were not or not yet members of the Community, among which were the Eastern and Nordic countries, Switzerland, etc.”

“We also had a much lighter administration than the European Economic Community; one might say that flexibility and efficiency were our main characteristics.”

Lazar visited several of EMRC’s colleagues at the beginning of his mandate and had established tight links which were happily strengthened at each meeting. “All our meetings were outstanding!” he says and adds that his colleagues were kind enough to tell him how disappointed they were when he stepped down from the EMRC chairmanship. Lazar also pays tribute to the late Claude Kordon, who represented Inserm after Lazars’ departure.

**Sheila Coates**  
*Scientific Secretary, 1975-1977*

EMRC was still referred to as the Group of European Medical Research Councils when Sheila Coates was secretary during 1975-1977. She was recruited to the humanities committee and only became involved with the biomedical sciences by chance. She was delighted, especially as this was a very exciting time in biomedical science with DNA research taking off. “I was sent to Heidelberg to see the redoubtable John Tooze, who had worked with Watson and Crick, to learn more and ask him to be a leading member of the committee”, she recalls.

“There followed many meetings of this new committee of distinguished members of the scientific community”. Coates recalls heated debates about safety, with some members calling for caution regarding recombinant organisms while others wanted to forge ahead with faster experiments. “There was much talk of safety devices, negative pressure laboratories, double airlocks, anti-contamination clothing, etc.” she adds. “The ESF naturally wanted to support this new science and also felt responsible for its safe working”. EMRC is happy to know that Coates achieved her ambition of training in medical school and becoming a successful general practitioner in the UK.
Marianne Minkowski
Head of Unit, 1999-2004

Marianne Minkowski was senior scientific secretary of EMC and head of the biomedical sciences unit and had the opportunity to work with the high-level expert group on biology and society set up by the Governing Council to elaborate three important Science Policy Briefings on the use of animals in research, genetically modified plants and human stem cell research.

“This had quite an impact among some of the EMRC members and was the basis of one of the newly created EUROCORES: EuroSTELLS, which was the subject of numerous and sometimes animated debates, but, in the end, was achieved successfully.”

EMRC Chairs and Heads of Unit
1971-2011

EMRC Chairs
• Professor Henry Danielsson, 1979-1982
• Sir James Gowans, 1985-1987
• Professor Henry Danielsson, 1988-1990
• Sir Dai Rees (also former ESF President), 1991-1994
• Professor Philippe Lazar, 1994-1996
• Professor Leena Peltonen, 1996-1998
• Professor Albert Hofman, 1998-1999
• Professor Clemens Sorg, 2000-2005
• Professor Ernst Rietschel, 2005-2006
• Professor Liselotte Højgaard, 2006-present

Scientific Secretaries/Heads of Unit
• Dr Sheila Coates, 1975-1977
• Ms Stéphanie Zobrist, 1978-1982
• Dr Erik Schenk, 1982-1986
• Professor José Borrell, 1986-1989
• Dr Jan-Henrik Kock, 1989-1995
• Dr Ingrid Wünning-Tschol, 1995-1999
• Dr Marianne Minkowski, 1999-2004
• Dr Carole Moquin-Pathey, 2005-2009
• Dr Stephane Berghmans, 2009-present

Ingrid Wünning-Tschol
Head of Unit, 1995-1999

EMRC also provided a training ground for some committee members. Dr Ingrid Wünning-Tschol, Senior Vice President at Robert Bosch Stiftung GmbH was senior scientific secretary of EMRC between 1995 and 1999 and says that, “During my time at EMRC, we invited the Exploratory Workshops and EUROCORES.” She adds that, “Beyond all these formal activities, for me it was the networks that I was able to create during my time there that I still build on when engaged in current European activities in the research arena.” She describes herself as the “mother of ESOF” and explains how she has recruited many scientists and policy-makers from her EMRC days.
**Highlights**

**Forward Looks**

**Personalised Medicine (IPM)**

Following the publication of a position paper on European biobanks and repositories by its scientific committee, the ESF Forward Look on Personalised Medicine (www.esf.org/ipm) came off to a very good start in the second half of 2011 with a workshop on the 'Future of Technologies for Personalised Medicine' in September in London (UK) and a 'Disease Summit' in October in The Hague (NL). Beside representatives from the scientific community, various stakeholders and the IPM scientific committee, representatives from the iPM management committee also actively participated in both of these events.

The proposed in-depth interview series of high profile experts has now been conducted and the final report delivered to the scientific committee in their latest November meeting in London.

Outputs from the London and The Hague meetings complemented by the in-depth interviews have now helped identify “big picture” issues of high relevance to personalised medicine. These issues were agreed upon and finalised at the recent meeting of the scientific committee. They will provide the focus for the topics to be further discussed in workshops to be held in Croatia (Hotel Grand Villa Argentina in Dubrovnik) on 13-14 February 2012. Professors Krešimir Pavelic (EMRC standing committee member) and Jasna Peter Katalinic have kindly accepted to serve as local organisers for this meeting.

**EUROCORES**

**ECT (Pan-European Clinical Trials) EURAMOS**

Professor Stefan Bielack (Klinikum Stuttgart, Olghospital, Germany), EURAMOS Project Leader, benefitted from a dissemination travel grant to make an oral presentation at the 24th Annual Meeting of the European Musculo-Skeletal Oncology Society (EMSOS), in Ghent (Belgium), on 18-20 May 2011. EMSOS is an international, interdisciplinary association of orthopaedic surgeons, medical and paediatric oncologists, pathologists, radiologists, radiotherapists and others with an interest in bone and soft tissue sarcomas.

Professor Bielack’s presentation entitled “Osteosarcoma treatment in Europe and elsewhere is far from being centralized: Lessons from EURAMOS-1 (NCT00134030)” was made to an audience of approx. 200 delegates as part of the session “Study Protocols”. The topic was the (de-) centralisation of recruitment observed within the European and American Osteosarcoma Study (EURAMOS-1) which is the largest osteosarcoma study ever performed.

2,106 patients from 419 institutions were registered in EURAMOS-1, including 1,023 patients from 240 institutions in 13 European countries. The degree of centralisation varied considerably between European countries, as only 4/13 averaged a total of >10 patients/center. Worldwide, only 3/419 participating institutions recruited >5 patients per year. Osteosarcoma patients in Europe and elsewhere are thus still dispersed across multiple institutions despite various attempts towards increased centralisation. This considerable fragmentation of care needs to be taken into account when planning, initiating, running and regulating large-scale clinical trials in rare cancers. The results of the presented analysis also clearly demonstrate the need for international funding programs for large-scale clinical trials in rare cancers, as such trials are only feasible if performed in multiple sites and across many countries. Due to a remarkable degree of de-centralised care, selection of only few centres in few countries is not feasible.

▶ More at www.esf.org/ect

**Exploratory Workshops**

**The Proteomics, Epigenetics and Pharmacogenetics of Pendrin (PEPP)**

This Exploratory Workshop was held at the Krallerhof Hotel in Leogang (AT) on 8-10 April 2011. The main convenor was Markus Paulmichl from the Institute of Pharmacology and Toxicology at Paracelsus Private Medical University Salzburg (AT). In addition to the official 27 attendees from 10 countries, students from the organizing institution had the opportunity to participate.

The aim of the workshop was to extend, fortify and intensify the scientific exchange between 20 research groups in Europe, the U.S., Israel and Japan. All groups are involved in the study of pendrin, a protein missing in a rare and so far incurable disease called Pendred syndrome. Their research on a future pendrin-blocker is also interesting insofar as it might potentially open a whole new paradigm in asthma bronchiale therapy. The outcomes of the workshop are planned to be a grant application in the EC Framework programme and the publication of a special issue of the journal "Cellular Physiology and Biochemistry" dedicated to this meeting.

**Image-guided Laparoscopic Therapies**

This Exploratory Workshop was convened on 15-17 June 2011 by Francisco M. Sánchez Margallo, Scientific Director of the Jesús Usón Minimally Invasive Surgery Centre
(JUMISC) in Cáceres (Spain), where it also took place. It was attended by 24 participants from nine European countries.

The main objective of this workshop was to bring together leading European groups working on image-guided surgery, from surgical diagnosis to surgical support. Of particular interest were the focus on the technological development of virtual models and real-time tracking, and the focus on the assessment of these techniques in surgical training and in the surgeon’s intraoperative assistance. The participants manifested an interest in pursuing a collaborative effort and the establishment of a consortium was discussed as a potential output of the workshop.

Research Networking Programmes

RNP REMEDIC
The RNP “Regenerative Medicine” (REMEDIC) sponsored a Summer School on basic research and clinical applications of stem cells and regenerative medicine on 25-29 July 2011 in the former Magdalena Royal Palace in Santander (ES), now occupied by the Universidad Internacional Menéndez Pelayo (UIMP). The School was organised by Professor Enrique Gómez Barrena (Department of Orthopaedic Surgery, Hospital La Paz, Universidad Autónoma de Madrid), the REMEDIC Spanish Steering Committee member. It was attended by 63 participants.

The use of stem cells opens new prospects for the treatment of musculoskeletal diseases. Large bone loss with difficult repair after trauma, failed repair or osteolysis, articular cartilage defects leading to joint degeneration, or even loss of neuromuscular function after structural spinal cord damage, are some of the serious health problems that may benefit from new regenerative approaches. Stem cell therapies, often in combination with growth factors and artificial scaffolds, are supported by an increasing number of studies and a few clinical investigations. However, many issues remain unsolved, and answers are needed before routine, large-scale applications may occur.

This course gathered European researchers and experts in various topics, from basic to clinical science. In addition, a press conference held on 28 July received important local and national press coverage. Professor Gómez Barrena, Professor Isabel Varela-Nieto, EMRC Core Group member from Spain and REMEDIC Rapporteur, and Javier Arias Díaz of the Spanish Ministry of Science and Innovation (MICINN) were interviewed and had the opportunity to give their views on regenerative medicine, future therapies, ethical aspects and medical research funding in Spain.

More at www.esf.org/remedic and www.helsinki.fi/remedic

Events 2011-2012

• THE HUMAN BRAIN
From cells to society
Berlin (DE), 14-15 December 2011

• FORWARD LOOK Personalised Medicine (iPM)
Management Committee teleconference
16 December 2011 ▶ www.esf.org/ipm

• RNP EUROCLEFTNET
Website workshop
Manchester (UK), 20 December 2011

• RNP EUMYONET
Steering Committee meeting
Prague (CZ), 31 January 2012 ▶ www.esf.org/eumyonet

• RNP ESF-ELN
Steering Committee meeting
Mannheim (DE), 31 January 2012 ▶ www.esf.org/ef-seln

• RNP EUMYONET
Myositis Workshop for European Myositis Network
Prague (CZ), 31 January to 1 February 2012 ▶ www.esf.org/eumyonet

• RNP ESF-ELN
9th Annual Symposium of the European LeukemiaNet / 13th Annual Symposium of the German Competence Network “Acute and chronic Leukemias” Mannheim (DE), 31 January to 1 February 2012 ▶ www.esf.org/ef-seln

• EMRC Core Group Meeting
Paris (FR), 9-10 February 2012 ▶ www.esf.org/emrc

• FORWARD LOOK Personalised Medicine (iPM)
Big Pictures workshop
Dubrovnik (HR), 13-14 February 2012 ▶ www.esf.org/ipm

• FORWARD LOOK Implementation of Medical Research in Clinical Practice (FLIP)
Implementation workshops
14 March 2012 ▶ www.esf.org/flip

• FORWARD LOOK Personalised Medicine (iPM)
Stakeholders conference
Rome (IT), 18 April 2012 ▶ www.esf.org/ipm

• EMRC Spring Core Group meeting
Strasbourg (FR), 25-26 April 2012
www.esf.org/emrc

• EMRC Spring Standing Committee meeting
Strasbourg (FR), 26-27 April 2012 ▶ www.esf.org/emrc

• RNP ENGIHR
Workshop on Diet and the Gut Microbiota: new directions
Helsinki (FL), 2-4 May 2012 ▶ www.esf.org/engihr

• RNP EUCCONET
European Child Cohort Network
Workshop on Dissemination
Edinburgh (UK), June 2012 ▶ www.esf.org/euconet

• RNP EUCCONET
European Child Cohort Network
Workshop on Metadata
Edinburgh (UK), June 2012 ▶ www.esf.org/euconet
ESF
The European Science Foundation (ESF) is an independent, non-governmental organisation, the members of which are 78 national funding agencies, research performing agencies, academies and learned societies from 30 countries. The strength of ESF lies in its 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. 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.

Cover:
From top left: Liselotte Højgaard Philippe Lazar Mary Smolskis Joaquim Casariego Thierry Damerval Håkan Billig Josef Syka Martin Röllinghoff János Réthelyi Krešimir Pavelić Kirsten Steinhausen Michael Stolpe Maria Manuela Nogueira Stephane Berghmans

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