

EMBO *encounters*

message from EMBO Executive Director



The launch of *EMBOencounters* opens up a new channel of communication for the EMBO community. The organisation has never been complacent about communications, but has perhaps not always found the right formula to convey its news effectively. A recent survey of the EMBO membership highlighted this issue and showed that members are often unaware of the full range of EMBO activities.

Without the right information, it is difficult for you to become fully engaged in EMBO's actions. We want to find a way to counter this – for your benefit as scientists and also to help spread the word on EMBO's activities. It is only in this way that we can ensure as many people as possible in the EMBO member states benefit from EMBO.

A disturbing trend points to EMBO members becoming less involved as referees with *The EMBO Journal* and *EMBO reports* and less

inclined to send their best papers to these journals. It would be disappointing if the EMBO membership became disengaged from these actions, which help EMBO to perform the full scope of its activities today. EMBO's reputation is very much linked to the standing of its journals, so the role that EMBO members play in these publications is crucial.

EMBOencounters is one way of bringing EMBO and its community closer together. The idea is to promote three-way communication – not only between EMBO and its members, young investigators and fellows but also in a cyclical nature within the EMBO community. We could all benefit from the networking an organisation like EMBO can offer and our hope is that this new launch, spearheaded by Lindsay Johnson, our new Communications Officer, will achieve these goals.

Contributions from EMBO members to *EMBOencounters* have made this first edition all the richer and we hope that readers will

highlights in this issue

- Nobel Prize for EMBO members
- María Blasco wins EMBO Gold Medal
- EMBO and NPG launch new journal
- EMBOencounters talks to Susan Gasser
- New EMBO members
- New young investigators
- Speakers corner – the ERC

continue to use the newsletter as a forum for their news. Your reaction to this first issue will be an important guide on how best to develop its content and style in the future. I look forward to using my column in future quarterly issues to bring you up to date with topics of particular importance. *Frank Gannon* ■

EMBO celebrates the big 4-0

40th anniversary of EMBO's foundation

Rumour has it the big '4-0' is not so big as it used to be. It seems 40 is young by today's standards and even more so in the life of a scientific organisation. Nonetheless, at 40 years 'young', EMBO could not let this milestone pass by without proper celebration. EMBO members came from far and wide to attend the 40th anniversary celebrations in Heidelberg on June 18–20.

Set high on the hill above Heidelberg, its home since 1973, EMBO has come a long way since its foundation in 1964. Many of EMBO's current initiatives were showcased at the anniversary meeting, but the event also gave the opportunity to look back at the early days and the scientific advances in which many EMBO members have had a hand. *Christiane Nüsslein-Volhard*, Director of Genetics at the Max Planck Institute for Developmental Biology in Tübingen and Secretary General of

EMBO, spoke of the organisation's role in her career. Nüsslein-Volhard described EMBO as "an organisation with enormous impact on the advancement of biological sciences." On a personal note Nüsslein-Volhard added, "EMBO was a great source of support to me, at a time when I was getting little help from elsewhere."

For Frank Gannon, Executive Director of EMBO, the event was particularly satisfying. "The discussions that engaged the founding EMBO members and subsequent generations of scientists showed that EMBO today has a major impact on European science – and that is a real reason for celebration. Now EMBO looks forward to new challenges and continued success."

To coincide with the meeting, EMBO published a special 40th anniversary book. This



Executive Directors of EMBO – 1965 to present: Raymond Appleyard, John Tooze, Frank Gannon

commemorative edition now serves as a permanent recollection of the events, history and timelines leading to the historic beginnings of EMBO and EMBC and includes personal recollections from EMBO members spanning the past 40 years.

www.embo.org/press/EMBO_40yrs.html

Nobel Prize for EMBO members

Two Israeli members win Nobel Prize in Chemistry 2004

EMBO members, *Aaron Ciechanover* and *Avram Hershko* of the Technion Institute of Technology in Haifa, Israel have been honoured with the Nobel Prize in Chemistry 2004. Ciechanover is director of the Rappaport Faculty of Medicine and Research Institute and Hershko, originally from Hungary, is a professor in the biochemistry unit at the Technion. The two scientists share the prize with American, Irwin Rose.

Hershko, Ciechanover and Rose receive the prize in recognition of their discovery of ubiquitin-mediated protein degradation. Over the past few decades much attention and research has been devoted to understanding how the cell controls the synthesis of a certain protein. The reverse, the degradation or breaking down of proteins, has been less explored. Aaron Ciechanover, Avram Hershko and Irwin Rose went against the stream and at the beginning of the 1980s discovered one of the cell's most important cyclical processes, regulated protein degradation – how the human body singles out unwanted proteins for destruction to defend itself from disease (the so-called 'kiss of death' molecular label).

"The protein-destroying process the scientists discovered was completely unexpected, because scientists had thought that such destruction was not regulated", said Lars Thelander, a member of the Nobel Committee for Chemistry. Thelander said researchers now hope they will be able to manipulate the protein degradation system in two different ways – either to prevent it from destroying proteins that boost the immune system or to eliminate proteins that help cause diseases.

At a news conference in the Haifa, the two Israelis said they hope their work will lead to new advances in the treatment of cancer. One such drug, Velcade, is currently on the US market, Ciechanover noted, and "there are many more in the pipeline." Hershko added, "It does not mean that a miracle drug to beat cancer is on the way. But I do believe there will be advances in the treatment of cancer based on our work. This I truly believe in."

<http://nobelprize.org/chemistry/laureates/2004/index.html>

Felicidades María Blasco!

EMBO Gold Medal goes to spanish scientist



María Blasco

Spanish scientist, *María Blasco* of the Centro Nacional de Investigaciones Oncológicas (CNIO) in Madrid, wins the EMBO Gold Medal 2004. María receives the award in recognition of her landmark work in the

area of telomeres. The scientist's research has had a groundbreaking impact on cancer research and gained wide recognition in the field.

The EMBO Gold Medal is awarded annually to a European scientist under 40 years of age with the aim of bringing the very best young researchers in Europe to the attention of a global audience. As a recipient of the medal, María is honoured as being a role model for other young scientists in Europe. EMBO Executive Director, Frank Gannon emphasised

this point in his words of congratulations, "María's contribution to cancer research is unquestionable and her unstinting dedication makes her the ideal role model for other young researchers." On hearing the news of her success, María commented, "I'm honoured to accept this prestigious award. I hope my achievement will inspire other women in science to persevere in their career."

The EMBO Gold Medal was presented at the Ministry of Science in Vienna, Austria on October 15, 2004 as part of the EMBO Members Meeting, "Frontiers of Molecular Biology".

www.embo.org/press/gold_medal2004.html

For news of other EMBO members' successes, see the Awards Column (p. 10)

A systemic approach

EMBO and NPG launch

Molecular Systems Biology journal

March 2005 will see the launch of a new open-access, online publication from EMBO and NPG. *Molecular Systems Biology* will be the first online journal to be dedicated solely to the emerging field of systems biology at the molecular level – and also marks the first direct involvement of EMBO with the open-access publication model.

molecular systems biology

Available solely as an online journal, *Molecular Systems Biology* will use an author-pays open-access pricing model. This means that all readers will be able to access research papers free of charge. Publication costs will be met in part by a charge to authors for each article published.

Publication of a journal of this kind recognizes the importance of systems biology as an emerging field and the need to make research in this area available to as wide an audience as possible in an appropriate format. The journal will publish relevant high quality research in the evolving fields of bioinformatics, genomics and proteomics, microbial systems, cell signalling and computational networks while working with the systems biology community to present standards and metrics for global complex datasets.

Molecular Systems Biology will publish high quality, peer-reviewed research using pioneering technologies, innovative formats and world-class editing. The senior editors of the journal are proven leaders in the field – *Ruedi Aebersold*, a founding member of the Institute for Systems Biology in Seattle; *Peer Bork*, coordinator of the Structural and Computational Biology Programme at EMBL, Heidelberg; *George Church*, Professor of Genetics at Harvard Medical School and Director of the Centre for Computational Genetics; *Leroy Hood*, co-founder and President of the Institute for Systems Biology in Seattle; and *Edison Liu*, Executive Director of the Genome Institute in Singapore. They will work together with a dedicated team of EMBO editors based at the EMBO offices in Heidelberg.

For more information or to submit a paper, go to:

www.molecularsystemsbiology.com

Reaching out

Family-friendly and far-reaching fellowship criteria

EMBO has long been committed to promoting family-friendly conditions and mobility in research – reflected in its Restart and World Programme fellowships. July 2003 saw EMBO taking this a step further by integrating the former Restart and World Programme fellowships into the main EMBO Fellowship Programme.

Time constraints and career breaks arising from childcare commitments as well as geographical borders can often hinder the career development process for scientists. Changes to the eligibility criteria of EMBO long-term fellowships now bring greater flexibility to career break candidates and those with childcare obligations. One example is the opportunity for these candidates to apply to carry out their two-year fellowship on a part-time basis over a period of up to three years.

Integration of the World Programme fellowship criteria into the short-term fellowship programme widens EMBO's reach outside Europe. Candidates from non-EMBC member states can now apply to take up fellowships in EMBC member states. The same holds true for applicants from EMBC member states wishing to collaborate with a laboratory in a non-member state. The main objective is to bring benefit to the candidate's home laboratory and promote collaboration.

Demand for EMBO fellowships remains high with a record number of eligible applications received this year.

www.embo.org/fellowships/fellow_guide.html

Best of both worlds

EMBO and Marie Curie Cooperation

EMBO and Marie Curie have come together to offer an attractive solution to fellowship applicants who are simultaneously offered an EMBO long-term fellowship and a Marie Curie fellowship. The aim is to allow candidates who are successful in both schemes to carry out the two fellowships over a combined period of three years.

For information on the EMBO and Marie Curie application procedure:

www.embo.org/fellowships/fellow_guide.html
www.mariecurie.org

Science and technology – a risky business?

EMBO reports investigates



Risk – a small word with huge implications for science and technology. In a special issue, published in October 2004, EMBO reports examines the perceptions, challenges and social repercussions associated with the risks of new technology. With an emphasis on the biological sciences, a series of 13 articles on governance, risk research, risk assessment and public perception explore the dichotomy between the benefits of scientific and technological advances and the real and perceived risks of these new developments.

Contributors to this special issue include:

Tikki Pang

Director of Research, Policy and Cooperation at the World Health Organisation (WHO):
"Globalization and risks to health"

José Mariano Gago

Professor of Physics at the Instituto Superior Técnico in Lisbon and former Portuguese Minister of Science and Technology:
"Science policy for risk governance"

David Ropeik

Director of Risk Communication at Harvard University:
"The consequences of fear"

Peter Weingart

Director of the Institute for Science and Technology Studies at the University of Bielefeld:
"Science in a political environment"



Read more: www.emboports.org

EMBO deadlines 2005

NEW!! EMBO Conference Series

1
February

EMBO invites applications for the **new EMBO Conference Series**. Successful applicants are guaranteed support for a series of three conferences over a six-year period. The aim is to provide a European equivalent to similar types of conferences in the USA. For further information e-mail: courses_workshops@embo.org

1
February

EMBO
Practical Courses,
Workshops,
Conferences,
Lectures

15
February

EMBO
Long-Term
Fellowships

1
April

EMBO
Young Investigator
Programme

15
April

EMBO
Science Writing
Prize

2004

Nov 28–Dec 1, Staffelstein, D

EMBO molecular medicine meeting:
Ras-, Raf-, Myc-signalling in lymphoma,
leukemia and other diseases

Nov 30–Dec 4, Coorg, India

Workshop:
Cell interactions in development and
disease

Nov 30–Dec 8, Cape Town, South Africa

EMBO/Wellcome Trust workshop:
AIDS and TB: the way ahead

Dec 4–8, Gaeta, I

Conference:
Critical assessment of techniques for
protein structure prediction

Dec 16–18, Hyderabad, India

Workshop:
Cell interactions in development and
disease

Jan 10–21, Accra, Ghana

Practical course:
RNAi and reverse genetics in
trypanosomes

2005

Jan 13–15, Marseilles, F

Workshop:
The road ahead – Future directions in
fundamental and clinical immunology

Jan 17–28, Singapore

Practical course:
Live cell imaging

Jan 27–29, Heidelberg, D

EMBO Young Investigators
Lab Management Course

Feb 14–19, Milan, I

Practical course:
Functional genomics: making sense
out of transcriptomes

Mar 13–20, Monterotondo, I

Practical course:
From mice to cells

Mar 16–20, Corsica, F

Workshop:
Meiotic divisions and checkpoints

Mar 17–19, Oxford, UK

Workshop: mRNA 3' Ends –
Interconnections with transcription,
translation and mRNA turnover

Mar 30–April 9, Plymouth, UK

Practical course:
Optical techniques for cell physiology
and developmental biology

For full details and links to individual events see:
[www.embo.org
/projects/courses_workshops](http://www.embo.org/projects/courses_workshops)

young investigator corner bringing news of Europe's very best young scientists

'Yip Yip' Hooray

Prestigious awards go to
six EMBO young investigators

Identifying and promoting Europe's very best young independent scientists is the main goal of the EMBO Young Investigator Programme. As well as supporting successful applicants in the early stages of their independent careers, the programme does a great deal to raise the profile of the young researchers. Six EMBO young investigators recently stepped further into the spotlight when they were presented with prestigious scientific awards.

Five EMBO young investigators were among 25 brilliant young scientists to take home the European Young Investigator Award (EURYIA) presented at the EuroScience Open Forum in Stockholm this August. *Reuven Agami*, *Oscar Marin Parra*, *Maria Mota*, *Francesc Posas* and *Bas van Steensel* each received awards of between Euro 1 to 1.25 million to further their research and independent careers in Europe.

The EURYIA scheme was developed by the European Heads of Research Councils (EUROHORCs) together with the European Science Foundation (ESF) to attract and retain outstanding young international researchers from all research fields and help them create their own research teams at European research centres. The five EMBO young investigators represented over half of the awards going to bioscientists.

The awards were presented by EUROHORCs president, Professor *Ernst-Ludwig Winnacker*, CEO of ESF, *Bertil Andersson* and Nobel Laureate, *Paul Crutzen*. Bertil Andersson commented, "Scientists are often in the early stages of their career when they formulate new ideas which later lead to paradigm shifts or a Nobel Prize. Therefore, if we want to support creativity and progress in science we should focus on the next generation of scientists and give them independence to pursue their own ideas."

Another EMBO young investigator, *Uri Alon* from the Weizmann Institute of Science in Israel, was recently honoured with the ISCB (International Society for Computational Biology) 2004 Overton Prize. Chair of the ISCB Awards Committee, *Larry Hunter*, said of Uri, "Uri Alon epitomizes the spirit of the Overton Prize. Despite being in a relatively early stage of his career, he has made significant contributions to computational biology, particularly in the areas of network motifs and the design principles of biological networks."

New EMBO young investigators 2004

Selections for the EMBO Young Investigator Programme 2004 were announced on October 12, 2004. 20 young investigators were selected from a total 172 applications:

- **Reuven Agami, NL**
- **Facundo Batista, UK**
- **Buzz Baum, UK**
- **Axel Behrens, UK**
- **Anne Bertolotti, F**
- **Matthias Bochtler, PL***
- **Santiago Elena, E**
- **Jiri Friml, D**
- **Karim Labib, UK**
- **Elena A. Levashina, F**
- **David Leys, UK**
- **Kevin Mitchell, IRL**
- **Simon Geir Møller, UK**
- **Panayiota Poirazi, GR**
- **Christian Spahn, D**
- **Katja Sträßer, D**
- **Michael Stumpf, UK**
- **Olivier Voinnet, F**
- **Anton Wutz, A**
- **Samuel Zeeman, CH**

*EMBO/HHMI Young Investigator

For more information:

www.embo.org/projects/yip
www.esf.org
www.iscb.org

EMBO on a course to India

EMBO practical course in Bangalore

Bangalore, India played host to an EMBO practical course on 'Functional Imaging in Cell and Developmental Biology' on September 12–19, 2004 as part of EMBO World Activities. The course met with extraordinary demand with a grand total of 170 global applications. The formula of accepting one-third European participation worked to encourage networking amongst the 20 young participating scientists. Held at the National Centre for Biological Sciences (NCBS), co-sponsor with EMBO, the practical course was enthusiastically received by both the students and organisers.

Director of NCBS, *K. VijayRaghavan* enthused, "The course was a tremendous success and a first in many ways. It brought the EMBO World Programme into India in an exemplary manner and brought students from all over the world to Bangalore to a wonderful period of intense science and collaboration, the effects of which will last many lifetimes." The European organisers, *Philippe Bastiaens* and *Rainer Pepperkok* of EMBL, are currently

Teachers work it out

EMBO practical workshops for science teachers

Throughout 2003 and 2004, some 700 to 800 teachers from 20 countries across Europe came together in their respective countries to attend EMBO practical workshops for science teachers. EMBO coordinates these workshops for a range of organisations, initiatives and companies as part of the EU-funded project, Continuing Education for European Biology Teachers (CEEET).

Held across nine locations in Europe and Israel so far, the latest workshop took place in Copenhagen in August 2004. EMBO practical workshops for science teachers are based around scientific talks, hands-on practical experiments and exhibitions that give participants an insight into the latest techniques being used in molecular biology today.

If you are interested in organising a similar event and do not yet have a copy of EMBO's guide for organisers and DVD, e-mail scisoc@embo.org.

'Spotlight on Teachers', the fourth EMBO international workshop for secondary school science teachers takes place on June 13–14, 2005 in Heidelberg.

[www.embo.org
/projects/scisoc/teachers05.html](http://www.embo.org/projects/scisoc/teachers05.html)

discussing further collaboration with their Indian colleagues. EMBO and NCBS will join forces once again on November 30 to December 4, 2005 in Coorg, India for a workshop on molecular physiology of intracellular calcium signalling.

Further links with India will be forged on December 16–18 this year with a workshop in Hyderabad on Cell Interactions in Development and Disease sponsored by EMBO World Activities and the Hyderabad Centre for Cellular and Molecular Biology (CCMB).

[www.embo.org
/projects/courses_workshops](http://www.embo.org/projects/courses_workshops)

Lights, camera, action

EMBO Media Workshop

On June 10, 2004 EMBO fellows and other interested scientists participated in the EMBO Media Workshop, led by *Bernard Dixon* OBE, renowned science communicator. Outside of informative talks and panel discussions from well-known media experts, participants had the chance to try out their writing skills, discuss articles and try their hand at role-playing and press interviews with journalists. The interactive workshop was professionally recorded and will be available as a media training DVD for scientists by early 2005.

The next EMBO media workshop, open to all, runs in Heidelberg on June 18, 2005.

[www.embo.org
/projects/scisoc/mws.html](http://www.embo.org/projects/scisoc/mws.html)

Information overload?

E-BioSci can help

A brand new release of the electronic information platform, E-BioSci, is now live. Funded by the European Commission, E-BioSci is a unique literature and gene search engine that integrates and interrelates research literature in the life sciences with data from different molecular, genomic and image databases. The latest release allows users to explore the connections between search results with more ease and navigate more smoothly between them.

Try out the latest version and give us your feedback:

p://prototype.e-biosci.com
E-BioSci www.e-biosci.org

From Hawaii with love

EMBO Science Writing Prize 2004

"The name's Pond, James Pond," sets the scene for a tale of intrigue and discovery that is 'From Hawaii with Love' – the winning entry in the EMBO Science Writing Prize 2004.



Penned by *Matthew J. Bottomley* of the Istituto di Ricerche di Biologia Molecolare in Rome, 'From Hawaii with Love' takes a novel look at the use of quorum-sensing systems in transcriptional regulation of bacteria. *Pseudomonas aeruginosa* bacteria, for example, are a leading cause of hospital-acquired infections and rely on quorum-sensing to cause disease. The lively dialogue tells of how James Pond stumbles across the phenomenon of the glowing Bobtail Squid and learns how its quorum-sensing technology can be used in the fight against the "pseudo" bacteria.

The EMBO Science Writing Prize is awarded annually for an outstanding piece of science writing that effectively communicates a topical issue to a non-scientific audience. Matthew Bottomley was presented with the award on October 15 at the EMBO Members Meeting in Vienna.

To read the winning entry and find out more about the EMBO Science Writing Prize visit:



[www.embo.org
/projects/scisoc/writing04.html](http://www.embo.org/projects/scisoc/writing04.html)

upcoming deadline Science Writing Prize 2005

April 15, 2005

Susan Gasser, Chair of EMBO Council

A voice for EMBO members

Susan Gasser, recently appointed Director of the Friedrich Miescher Institute for Biomedical Research in Basel, Switzerland, has been an EMBO member since 1993. In 1997 she was elected Vice-Chair of EMBO Council and in July 2003 took on the position of Council Chair.

EMBOencounters (E): You've been with EMBO Council for some years now. How do you view the role of the Council in EMBO's activities?

Susan Gasser (SG): Basically, EMBO Council has a fairly clear-cut function. Members of the Council are elected to provide EMBO with independent input on scientific standards and policy and to help guide the activities of the organization – like a kind of scientific advisory board. Council meetings with EMBO staff provide a forum for airing diverse viewpoints on trends in European science and give us the means of integrating these views into EMBO actions.

E: In this sense, would you say that EMBO Council is a voice for EMBO members?

SG: Certainly – we aim to achieve that as far as possible. EMBO's members are the basis for its reputation and it's important to reflect their views in the organization and in any actions EMBO takes in the European scientific arena. Of course, EMBO already has close links with its members – many are directly involved in EMBO programme committees and other EMBO activities.

However, beyond this level of involvement, the Council tries to represent the diversity of interests of the collective EMBO membership in discussions on EMBO activities. At the same time, we act as a sounding board for new ideas and activities.

E: So how does that work in practice and can you give a concrete example?

SG: First of all, at the Council member level, we try to achieve a balance in terms of countries, research areas, age, and gender. Secondly, each member is allocated to a programme and at least once a year exchanges input and suggestions with the EMBO committees and programme managers. This helps Council members gain a better understanding



Susan Gasser

of EMBO activities and guide its future directions more effectively.

"Involvement" really is the key word here. An excellent example has been our behind the scenes contribution to EMBO's publishing activities. Council meetings gave rise to lively debate on the question of "open access" electronic publishing and its relationship to The EMBO Journal and EMBO reports. One direct outcome of these discussions will be the launch by EMBO and NPG of the online, open access *Molecular Systems Biology* journal in March 2005.

E: How do you see the role of EMBO Council evolving in the years to come?

SG: This very much depends on the evolution of science in Europe and the will of the EMBO membership. The very nature of the Council's responsibility means that we need to be con-

stantly evolving in line with changes in Europe and EMBO itself. Essentially it works in a cyclical nature – as EMBO evolves and widens its reach, so must the Council. And as the scientific community reacts to changes, the Council helps to bring this input to EMBO.

One thing is for sure – EMBO Council members will have to continue to think "beyond their own labs" to answer the challenge of representing the values and aims of the wider scientific community to the governments, people and scientists of Europe. Basically we are just trying to continue what EMBO has done so effectively over the past 40 years.

The votes are in

EMBO members elect 2005 Council

Each year the EMBO membership elects three members to serve on the EMBO Council. The results of this year's elections reinstated *Carlos Martinez-A.* of the Department of Immunology and Oncology at the Centro Nacional de Biotecnología in Madrid and *Ingrid Grummt* of the German Cancer Research Centre (DKFZ) in Heidelberg. Newly elected for 2005 is *Daniel Louvard* of the Morphogenesis and Cellular Signalisation Laboratory at the Institut Curie in Paris. Two members were also

co-opted to the EMBO Council – *Anton Berns* of the Division of Molecular Genetics at the Netherlands Cancer Institute in Amsterdam and *Roberto di Lauro* of the Stazione Zoologica A. Dohrn in Naples. The elections take effect from January 2005.

Existing Council member, *Erik Boye* of the Department of Cell Biology at the Institute for Cancer Research Montebello in Oslo will take on the role of EMBO Council Vice-Chair, previously performed by *Antonio Coutinho* of the

Institut Gulbenkian de Ciencia in Oeiras, Portugal. The Council thanked Antonio for his contribution to Council activities over the past 5 years and looked forward to Erik's input from January 2005.

New EMBO members 2004

■ **Siv G.E. Andersson, S**

■ **Yehudit Bergman, IL**

■ **Christer Betsholtz, S**

■ **Michael Brunner, D**

■ **Graham Neil Cameron, UK**

■ **Bart de Strooper, B**

■ **Hugues De Thé, F**

■ **Ivan Dikic, D**

■ **Jeff Errington, UK**

■ **Marco Foiani, I**

■ **Hans Hengartner, CH**

■ **Jonathon Howard, D**

■ **Laurence Daniel Hurst, UK**

■ **Mariusz Jaskólski, PL**

■ **Klas Kärre, S**

■ **Jan Löwe, UK**

■ **Paolo Lusso, I**

■ **Andrew J. McMichael, UK**

■ **Abraham Minsky, IL**

■ **Sergio Moreno, E**

■ **Klaus-Armin Nave, D**

■ **Alain Nicolas, F**

■ **Thomas Nyström, S**

■ **Stephen G. Oliver, UK**

■ **Hans-Georg Rammensee, D**

■ **Marina Rodnina, D**

■ **Pernille Rørth, D**

■ **Titia K. Sixma, NL**

■ **Kirsten Skarstad, N**

■ **Austin G. Smith, UK**

■ **Eirikur Steingrímsson, IS**

■ **Iannis Talianidis, GR**

■ **Dimitris Thanos, GR**

■ **Juan Valcárcel, E**

■ **Maarten van Lohuizen, NL**

■ **Ashok Venkitaraman, UK**

■ **Karen Vousden, UK**

New associate EMBO members 2004

■ **Nancy Kleckner, USA**

■ **Dieter Söll, USA**

■ **Peter Walter, USA**

For more details of members' institutes and research areas, see: www.embo.org/organisation/new_members_04.html

Bioinformatics learning takes to the road

European School in Bioinformatics



The European School in Bioinformatics leads a nomadic existence. Established in January 2004 as part of the EU-funded BioSapiens Network of Excellence, the school has no fixed location. Instead it operates as a mobile learning unit, taking to the road every six months to bring basic training and practical techniques in computational biology to young researchers all over Europe. The school is aimed at PhD students and young post-docs who are new to computational biology or just starting to get to grips with bioinformatics tools in "-omics" projects.

Every six months the school touches down in a different European country. The next port of call will be the Netherlands on January 22–28, 2005, where over 40 young scientists will come together to learn the latest in genomics, proteomics, transcriptomics, metabolomics and systems biology. As with all European School courses, the focus will be on 'learning by doing' with participants having the chance to try out their new skills on the computer.

Anna Tramontano, EMBO member and training coordinator for the BioSapiens Network, explains the motivation behind the European School, "There is a clear need to train and recruit creative and innovative young scientists in Bioinformatics, and at the same

time help users in experimental labs to keep up with the developments in the field."

The BioSapiens Network of Excellence also offers training at different levels ranging from introductory courses to expert training. The overall goal of the network is to combat the current fragmentation of bioinformatics research across Europe. A number of other EMBO members are also involved in BioSapiens including Janet Thornton, Peer Bork, Shoshana Wodak, Gunnar von Heijne, Lazlo Patthy and Antoine Danchin. BioSapiens Network of Excellence

www.biosapiens.info

2nd European School on Bioinformatics

www.cmbi.kun.nl/euroschool

Immunology made 'e'asy

Web-based immunology teaching programme

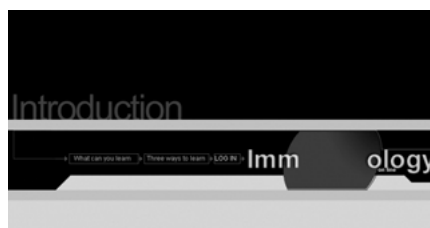
EMBO member, Jean-Pierre Kraehenbühl, of the Swiss Institute for Experimental Cancer Research in Lausanne, is responsible for a novel web-based immunology teaching programme currently being piloted across five Swiss universities. 'Immunology Online' offers tailored, interactive learning to medical and biology students.

In today's electronic age, new online learning environments are appearing on a daily basis. EMBOencounters asked Jean-Pierre what makes this particular learning portal different. "Immunology Online incorporates the best of both worlds – not only does it benefit from the unlimited opportunities of multimedia technology but also uses a pedagogical approach that can be easily integrated into a traditional immunology curriculum."

On first sight, the portal certainly has the desired 'wow' factor with videos of clinical cases, a virtual microscope and a clickable 3-D body that sheds its layers to reveal the structure and function of human organs. But as Jean-Pierre points out, what really sets the portal apart is the breadth of content on offer.

Immunology Online provides a complete course with 8 clinical immunology modules and six basic immunology modules. Students can choose from three learning approaches. Medical students learn how to solve a clinical case using video footage, digital images and online discussion forums. The 'structure to function' approach provides an in-depth insight into the physiology of the immune system. For biology students, the portal offers

article-based learning to develop skills in analytical reading of scientific literature and to strengthen basic science knowledge.



Immunology Online is not only comprehensive in scope. The proposed geographical reach is also ambitious. Currently linking students and teachers from five different Swiss universities, the ultimate aim of the programme is to move further afield and extend the network to other global universities. In particular, the organisers would like to use the online portal to bring the latest immunology knowledge to medical students and healthcare professionals in developing countries.

Immunology Online is one of eleven biomedical projects launched as part of launched as part of the Swiss Virtual Campus, a joint initiative from a group of higher education institutions in Switzerland. Other projects include neurobiology, basic and clinical pharmacology, and embryology.

EMBOencounters readers interested in trying out Immunology Online can contact Jean-Pierre for a test user:

Jean-Pierre.Kraehenbuhl@isrec.ch

Immunology Online

<http://iol.bio-med.ch>

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Bridging the divide

MitoCheck project tackles mitosis

Leading scientists from research institutes, universities and industries across Europe recently joined forces to tackle the fundamental question of how mitosis or cell division is regulated. The EU-funded project is called MitoCheck and aims to track down the genes required for division in human cells and determine how protein kinases, a type of enzyme, control the mitosis process.

MitoCheck is coordinated by EMBO member, *Jan-Michael Peters* of the Research Institute of Molecular Pathology (IMP) in Vienna and brings together scientists from Austria, Germany, UK, Italy and France. Participating researchers include EMBO members, *Tim Hunt*, *Kim Nasmyth*, *Tony Hyman* (2003 EMBO Gold Medal Winner) and EMBO young investigator, *Andrea Musacchio* as well as EMBL-based scientists, *Jan Ellenberg* and *Rainer Pepperkok*.

Mitosis is one of the most fundamental processes in the human body. Mistakes occurring during cell division contribute to disorders such as cancer and infertility. Despite huge strides in the understanding of cell cycle regulation over the past two decades, the regulation of mitosis is still a relatively undiscovered field. This is where MitoCheck comes in. The project aims to pinpoint a comprehensive list of the mitotic genes,

determine what happens when these genes are suppressed and subsequently analyse the genes' binding partners, phosphorylation status and potential role in cancer diagnosis.

This is an ambitious project with potentially far-reaching consequences for biological research and the understanding of cancer and other diseases arising from disruptions in the cell cycle. Technology developed within the scope of the MitoCheck project, such as genome-wide RNA interference screening and mass spectrometry, is also likely to have an impact on biological research well beyond the cell cycle community.

Despite the scale of the project, Jan Michael-Peters of the IMP is optimistic, "We have set very ambitious goals, which no single research partner could have tackled alone. This is very much a group effort reliant on our combined expertise in molecular and cell biology, biochemistry, modern microscopy, proteomics, bio-informatics and clinical pathology. By bringing together a group of excellent

European scientists from such diverse areas, we can hope to solve a complex biological puzzle."



www.mitocheck.org

2004

Nov 8–10, Rome, I

Chemistry and Biology:
the transition between the two centuries
Maurizio Brunori, Ernesto Carafoli
www.lincci.it/convegni/CONVEGNI.2004/PROGRAMMI/PRG.CHEMISTRY

Dec 4–6, Edinburgh, UK

Joint Biochemical Society/Royal Society of Chemistry meeting:
RNA Structure and Function
David Lilly
www.biochemistry.org/meetings/programme.cfm?Meeting_No=SA031

2005

March 6–8, Freiburg/Breisgau, D

International Symposium:
Protein sorting
Nikolaus Pfanner, Michael Reth
www.proteinsorting.de

April 20–23, Berlin, D

International Symposium:
Proteolysis in Prokaryotes:
Protein Quality Control and
Regulatory Principles
Info and applications to *Regine Hengge*
Rhenggea@zedat.fu-berlin.de

May 22–24, Madrid, E

Cantoblanco Workshops on Biology: Signaling
networks in immunity and
inflammation
Jorge Moscat, Carlos Martínez-A,
Klaus Rajewsky, Alain Israel
www2.cbm.uam.es/signal

If you are involved in or organising an event that may be of interest to the EMBO community, contact: communications@embo.org

Speakers corner

Have your say on hot topics in European science or make a comment on EMBO and its activities

In this issue, we feature a mass petition published in *Science* in August 2004 calling for urgent action on the establishment of a European Research Council (ERC). The letter was launched by the Initiative for Science in Europe and was co-signed by over 50 European scientific organisations including EMBO:

We call upon those who are entrusted by Europe's people to create the conditions for Europe's long-term future to act on the conviction that science is a cornerstone of European society. Providing funds for researchers, engaged in basic research, at the European level through an ERC is an important milestone in achieving a knowledge-based society.

Do you agree? Make your views known by writing to communications@embo.org.

Read the full letter here: www.initiative-science-europe.org/forms_maps/Science.pdf

research

Changing the recognition specificity of a DNA-methyltransferase by in vitro evolution

Timár E, Groma G, Kiss A, Venetianer P
Nucleic Acids Res. **32**: 3898–3903,
July 25, 2004

Three-dimensional structure of the native Spliceosome by cryo-electron microscopy

Azubel M, Wolf SG, Sperling J, Sperling R
(2004) *Molecular Cell* **15**: 833–839,
September 10, 2004

The genome of the diatom *Thalassiosira pseudonana*: ecology, evolution, and metabolism

Bowler C (Ecole Normale Supérieure, Paris/Stazione Zoologica, Naples), Armbrust G (University of Washington, USA), Rokhsar D (Joint Genome Institute, USA), and 22 other laboratories worldwide
Science **306 (5693)**: 79–86, October 1, 2004

Congruent mammalian trees from mitochondrial and nuclear genes using bayesian methods

Reyes A, Gissi C, Catzeffis F, Nevo E, Pesole G, Saccone C
Mol. Biol. Evol. **21(2)**: 397–403, 2004

books

Handbook of Comparative Genomics

(John Wiley & Sons Inc., 2003)

By Cecilia Saccone and Graziano Pesole

“The Handbook of Comparative Genomics will provide interesting reading and perspective to almost everyone involved in biological sciences.”

Quarterly Review of Biology, March 2004

Structural Aspects of Protein Synthesis

(World Scientific Publishing, 2004)

By Anders Liljas

This comprehensive and highly illustrated book provides basic and up-to-date summary of translation on bacterial ribosomes with emphasis on the structural insights.

awards of excellence

Albert Lasker Award for Basic Medical Research 2004, USA

Pierre Chambon for his work on hormone receptors

Anders Jahre's Award for Medical Research 2004, CH

Erling Seeberg and *Hans E. Krokan* for their groundbreaking DNA research

EMBO Gold Medal 2004

María Blasco for her landmark work in the area of telomeres

European Young Investigator Award (EURYIA) 2004

Reuven Agami, *Francesc Posas*, *Oscar Marin Parra*, *Maria Mota* and *Bas van Steensel*

Gairdner International Awards 2004, Canada

R. John Ellis and *F. Ulrich Hartl* for their fundamental discoveries concerning chaperone assisted protein folding in the cell and its relevance to neurodegeneration

International Antonio Feltrinelli Award for Biology and Medicine 2004, I

Gottfried Schatz for his pioneering discovery of mitochondrial DNA and his work on the formation of mitochondria

International Society for Computational Biology (ISCB) Overton Prize 2004

Uri Alon for his outstanding contribution to computational biology

Knighthood in Queen's Birthday Honours, UK

Sir Gregory Winter, CBE for services to molecular biology

Marcel Benoist Prize 2004, CH

Adriano Aguzzi for his work on degenerative neurological diseases

Morgagni Gold Medal 2004, UK

Johan Auwerx for his work on nuclear receptor signaling and its used in treatment and prevention of complex disorders including cancer

Nobel Prize in Chemistry 2004, SE

Aaron Ciechanover and *Avram Hershko* for the discovery of ubiquitin-mediated protein degradation

The next EMBOencounters issue — winter 2004/2005

will be dispatched in February 2005. Please send your contributions/news to: communications@embo.org by the 15th of January 2005