

## MESSAGE FROM EMBO EXECUTIVE DIRECTOR

## Accept or reject?

## How EMBO decides what to publish



All scientists have an interest in what happens to their papers after submitting them to a journal. How do they come to be accepted or rejected? Many discussions point to the fact that scientists are unaware of the intricacies of this process.

Every journal is different, but *The EMBO Journal*, *EMBO reports* and *Molecular Systems Biology* have developed a system that is fast, reliable and based solely on scientific merit. Irrespective of the area, papers from all sections of the life sciences being treated equally.

EMBO deals with a huge quantity of submissions every year – over 3,000 for *The EMBO Journal* and more than 600 for *EMBO reports*. With this number increasing annually and a continued demand from authors for rapid processing, reaching a fair and well-informed decision in a short time is challenging. EMBO publications have an excellent record in this respect with an average time between submission and the initial decision of only 21 days.

So how does the editorial process work? Each paper undergoes a detailed first reading by a full-time editor based at EMBO to gain an impression of the content and quality. A daily meeting with the other editors allows for in-depth discussion of each paper to decide whether it should proceed for further review.

Some decisions are easier than others. Research that is novel and obviously at the frontier of current knowledge invokes a clear “yes”. Submissions that lack the novelty, content and spark of a top-class paper are rarely successful. In these cases, a fast and unequivocal refusal is essential so as not to waste the author’s time or burden referees with unnecessary reviews.

With approximately a third of submitted papers, the decision is less clear-cut. In these cases, the editors turn to an Advisory Editorial Board made up of EMBO Members with exper-

tise in all areas of the molecular life sciences. Based on their guidance, a final decision is made and the paper either moves to the next phase or is rejected.

All papers that continue in the system undergo peer review by three external experts. Using their reports, the editors re-examine the paper and decide whether it should be accepted. During this process, *The EMBO Journal* editors consult with the Executive Editor, Pernille Rørth. As Senior Editor of *EMBO reports*, I review all submissions. And for *Molecular Systems Biology*, a team of five Senior Editors, all leaders in the field, play a crucial role in the decision-making process.

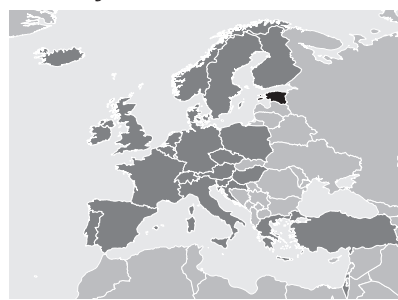
This interplay between active scientists and professional editors ensures a fair and expert analysis and an optimal use of the external peer review system. Inevitably there is the occasional disagreement over an editorial decision. Here *The EMBO Journal* is supported by four sterling Senior Editors in David Baulcombe, Ari Helenius, Tim Hunt and Tony Hunter, who deal with any problems the EMBO editors are unable to resolve with the authors. This multi-layered review process is in place to avoid mistakes and on the very rare occasion that an error of judgement might occur, it is easily rectified.

Recently EMBO analysed the fate of papers rejected by *The EMBO Journal* and *EMBO reports* in 2004. Over 90% of the papers that were subsequently published appeared in journals of lower impact. More significantly, most had a lower citation rate than the average EMBO paper. Also tracked were papers rejected in the first phase of the editorial process that were re-introduced into the system after the authors had presented a reasonable argument for a second consideration. Approximately 8% of these papers were later accepted for publication.

In summary, authors submitting papers to EMBO publications can be assured that all deci-

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sions are based on expert input, an absence of bias and a willingness to publish in any area if the paper is exciting and broadly significant. On a final note, it is important to stress that at no time does our publisher, Nature Publishing Group, have input into this process. EMBO is an organisation run by scientists for scientists and this is as true for our publications as for other EMBO activities. *Frank Gannon*

## Estonia becomes EMBC's 25th member state

### Formal ratification by Estonia of EMBC Agreement



Estonia has officially joined the European Molecular Biology Conference (EMBC), EMBO's intergovernmental funding body. The country's membership began on 30 January 2006, opening the way for Estonian scientists to participate in EMBO activities and benefit from the organisation's scientific opportunities.

The accession of Estonia brings the EMBC membership to a total of 25 countries through-

out Europe. Estonia is an important addition and extends EMBC's representation in Central and Eastern Europe. Other member states in the region include Croatia, the Czech Republic, Hungary, Poland, Slovenia and Turkey. EMBC has also accepted an application for membership by the Slovak Republic, which now awaits formal ratification.

*Mailis Reps*, the Estonian Minister for Education and Research was enthusiastic about Estonia's new EMBC status: "We are delighted to become a member of EMBC and the prestigious EMBO community. This is a remarkable opportunity to co-operate closely with top European molecular biologists in furthering this scientific discipline."

The Estonian delegates to EMBC will be *Toivo Maimets*, Professor of Cell Biology at Tartu University's Institute of Molecular and Cell



*Toivo Maimets*

*Toivo Rääm*

Biology and *Toivo Rääm*, Attaché for Scientific Affairs in Estonia's Permanent Representation to the EU.

#### EMBC

■ [www.embo.org/about\\_embo/embc.html](http://www.embo.org/about_embo/embc.html)

#### Estonian Ministry of Education and Research

■ [www.hm.ee](http://www.hm.ee)

## Targeted support

### EMBO Installation Grants

A total of 25 member states support EMBO activities. This involves more than funding the top research, which would restrict EMBO opportunities to countries with highly developed science bases. Targeted regional initiatives, such as the recently launched EMBO Installation Grants, help to address the differences in scientific infrastructures from country to country and boost science on a national level.

The EMBO Installation Grants were launched in February 2006 as a special project of EMBO's intergovernmental funding body, EMBC. The aim is to strengthen research in the countries participating in the scheme by attracting talented scientists into their research communities. Currently Croatia, the Czech Republic, Estonia, Portugal, Poland and Turkey are signatories with other countries likely to join in future years. The grants offer an attractive funding and networking package to scientists of any age who want to set up a laboratory in one of these countries. The scheme is aimed at researchers currently working outside the country where they want to establish their lab.

Funding comes directly from the member countries and successful applicants receive an annual award of 50,000 Euro for three to five years, on top of any package being offered by their institutes. Combined with full access

### EMBO INSTALLATION GRANTS

#### ► AT A GLANCE

- € 50,000 annually for three to five years
- Participation in EMBO Young Investigator networking activities

#### ► ELIGIBILITY

- Group leaders establishing labs in a participating country (currently *Croatia, Czech Republic, Estonia, Portugal, Poland, Turkey*)
- First-class scientific background and publication record
- Job offer in a participating country at the time of application
- Position outside the host country for at least two years prior to application

#### ► ANNUAL APPLICATION DEADLINE

(as of 2007)  
15 April

► [www.embo.org/sdig](http://www.embo.org/sdig)

to the networking opportunities of the EMBO Young Investigator Programme, the grants will give scientists the extra support they need to get their labs started and establish a reputation and network within the European scientific community. This increased exposure should also attract other EU funding and ultimately strengthen science in these countries.

The Young Investigator Programme is overseeing the selection process with strict attention to scientific excellence and the close involvement of EMBO Members. Eligibility criteria include a first-class scientific background and publication record. Scientists apply jointly with their institutes and an integral part of this application is a commitment by the receiving institute to support the scientists beyond the duration of the grant.

The first application round for the EMBO Installation Grants ended on 15 July with over 70 applications being received. Grant recipients will be announced in November 2006.

Annual application deadline (as of 2007)

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## SPOTLIGHT ON...

## EMBO Courses & Workshops Programme

### Promoting collaboration and exchange

EMBO has a long tradition of supporting researchers and their communities. In its early days back in 1964, EMBO recognised the need for scientists to meet more regularly to exchange and discuss the latest techniques in their fields. It was against this backdrop that the Courses & Workshops Programme was born. For over forty years, it has provided support for numerous practical courses, workshops and conferences on themes reflecting the latest advances in molecular biology research.

Over 5,000 researchers, at all career stages, attend approximately 70 EMBO-sponsored practical courses, workshops and conferences each year. They follow in the footsteps of past participants, including EMBO Members, who look back on earlier meetings as an exciting period of learning and instrumental in their own scientific development. Many of today's meeting organisers also come from the EMBO membership.

*EMBO Practical Courses* introduce new methodology into European laboratories. These focused and highly productive courses teach young scientists the latest techniques and offer them hands-on experience that they can apply upon returning to their labs. Course organisers also benefit. Hosting a practical course draws attention to the work being carried out in their labs. Group members also have the opportunity to interact with scientists from all over Europe and the world. New contacts and collaborations with participants often endure long after the course ends.

*EMBO Workshops* bring scientists from multi-disciplinary fields together to exchange recent important results and discuss specific topics. Although intended to be one-off events, some workshop themes spawn multiple meetings. This became apparent in the 1970s, when genetic recombination was the topic of what became a series of ten very popular EMBO Workshops. Those gatherings, with their stimulating discussions and sharing of results, garnered quite an international reputation and set the tone for future events.

*EMBO Conference Series* were developed as a result of this trend. Three successive meetings are held biennially over a six-year period in an EMBC Member State. Conferences focus on topics of major importance to the scientific community in Europe and, where applicable, alternate with corresponding meetings in North America or Asia. Themes correspond with the 18 subject categories of EMBO's journals, with

the growing field of molecular medicine being a timely topic of recent focus. Through this interconnection, EMBO aims to promote the formation of collaborative networks, thereby strengthening European research.

Reputed for their quality and consistency, EMBO's practical courses, workshops and conferences continue to enjoy increased success and popularity. This is a reflection of the hard work and dedication of the many people involved in taking these events from the application stage to implementation.

Every year, the programme receives an average of 100 applications at the EMBO office in Heidelberg. A new online application system, implemented in 2005, is helping to streamline the initial processing of these applications, which are reviewed by the ten EMBO Members who make up the Course Committee. These members meet twice annually to identify new topics and select the highest quality meetings, which are funded to a maximum of 30,000 euro by the EMBC Member States.

**Over 5,000 researchers, at all career stages, attend approximately 70 EMBO-sponsored practical courses, workshops and conferences each year.**

Once the meetings have been chosen, the next step is their time-intensive organisation and implementation. This involves the active participation of the scientific organiser along with the personal assistance of the programme's small but committed staff. This support has recently increased in the form of a free Online HelpDesk, providing organisers with individually-designed websites, posters and online application systems.

*EMBO Plenary Lectures* also help to promote scientific exchange throughout Europe and at an international level. EMBO sponsors keynote lectures by EMBO Members at approximately 35 major scientific meetings per year. This encourages collaboration with their international counterparts and brings worldwide attention to EMBO's activities.



Mary Gannon (Programme Manager)  
Lynne Turnbull (HelpDesk Administrator)  
Zeynep Dinsi (Administrator)

*EMBO Joint Meetings* include ESF-EMBO Symposia, a collaboration between EMBO and the European Science Foundation (ESF). This partnership has resulted in the sponsoring of eleven interdisciplinary meetings between 2005 and 2007 on topics of major importance to the scientific community.

In an effort to increase interaction between European and non-European researchers, the Courses & Workshops Programme also extends its offerings to a global audience as part of EMBO World Activities. The programme funds practical courses and workshops held outside of Europe, improving links between European research communities and the respective countries.

Forty years on, the programme's multi-disciplinary approach continues to earn it wide international recognition and respect. Mary Gannon, Courses & Workshops Programme Manager, says this is also evident in the comments of participants. "This positive feedback encourages and validates EMBO's continued involvement in providing high-quality meetings that support both the individual scientist and their research communities," she says.

### EMBO Courses & Workshops Programme

■ [www.embo.org/courses\\_workshops](http://www.embo.org/courses_workshops)

### Bi-annual application deadlines



EMBO Courses & Workshops



UDC Ringelstein, EMBL Photolab

The 2006 EMBO Fellows Meeting on 26–29 May marked the tenth annual meeting of its kind. The event brings together past and present EMBO Fellows to share research results and career experiences.

The Heidelberg meeting attracted 56 participants from all over Europe and North America. The enthusiastic young researchers discussed their work and explored possible collaborations and friendships. Each fellow gave a brief talk and presented a poster describing the background to their research. EMBO Members, *Gareth Griffiths*, *Christof Niehrs* and *Jonathon Howard* chaired these sessions and also shared experiences of their life in science.

A special lecture was given by *Thomas Schweins*, Vice President of Qiagen, who started his career in research working with

EMBO Member, *Alfred Wittinghofer*. He later went to the US as a post-doc, where he also did his MBA. *Schweins* discussed his path from academia to management with the fellows.

In addition to the scientific sessions, the fellows were treated to a series of informative careers talks. *Sandra Caldeira*, Editor for *EMBO reports*, gave insights into the editorial process at *The EMBO Journal* and *EMBO reports*. Former EMBO Fellow, *Marie Aronson* of the French Embassy in Finland shared her experiences of making a career in the diplomatic world. A full-day media communications workshop, led by *Andrew Moore*, EMBO Science & Society Programme Manager involved participants in interactive exercises and mock interviews with journalists.

The comments of EMBO Fellow, *Maria Borrell* echo those of many other appreciative participants, "The Fellows Meeting was a superb meeting, both scientifically and personally. I met many young scientists who are ready to take scientific risks but are also mature enough to think a lot before taking them. It has really been a great experience."

■ [www.embo.org/fellowships/fm06.html](http://www.embo.org/fellowships/fm06.html)

#### Bi-annual application deadlines

<b>15</b> February	<b>15</b> August
EMBO Fellowships	

## Frontiers of Molecular Biology

### 2006 EMBO Members Workshop

Have you registered yet for the next EMBO Members Workshop? The annual *Frontiers of Molecular Biology* meeting will take place in Sheffield, UK from 13–16 October 2006. Participation is open to the entire scientific community.

This year's workshop will feature a range of talks by the EMBO Members elected to the organisation in 2005. There will also be a mini-symposium on epigenetics featuring a plenary lecture by *Adrian Bird* and presentations by EMBO Members, *Philip Avner*, *Edith*

*Heard*, *Achim Leutz*, *Joachim Lingner*, *Jerzy Paszkowski* and *Hervé Vaucheret*.

Other highlights include a special workshop on media communication and the presentation of the 2006 EMBO Gold Medal.

#### EMBO Members Workshop 2006

■ <http://members2006.embo.org>

#### Speakers (EMBO Members elected in 2005)

■ [www.embo.org/about\\_embo/press/new\\_members05.html](http://www.embo.org/about_embo/press/new_members05.html)

**Frontiers of molecular biology**  
organised by *Philip Ingham*

EMBO Members Workshop  
**Sheffield, 13–16 October 2006**





## Vienna hosts EMBO Young Investigators

2006 Young Investigator Meeting

Robert Herbst | www.pov.at

Current and new members of the EMBO Young Investigator Programme gathered for the sixth annual meeting from 3–6 May 2006. For the first time, this event was held outside EMBO's home base in Heidelberg at the Research Institute of Molecular Pathology (IMP) in Vienna, Austria.

*Barry Dickson*, Director of the IMP, is an EMBO Member and former EMBO Young Investigator. As host of the meeting, he enjoyed getting to know the 58 young investigators and learning more about their research. "It was a real thrill to have the young investigators here. They're a wonderful group of people doing great science – and they were a lot of fun. It was like the scientific equivalent of a whirlwind tour of Europe in three days: in the end it's all a bit of a blur, but you're left wanting to learn more about the people you've met and their research."

The annual meeting gave the young investigators the opportunity to welcome the recipients of EMBO/HHMI Startup Grants to their community. All participants had the chance to present their research, underlining the network's breadth and diversity. The resulting discussions on interdisciplinary topics and the formation of new collaborations further exem-

plified the opportunities this meeting offers. Participants also took part in the networking activities – reinforcing connections made at past meetings and mingling with group leaders from the IMP.

Another highlight in the programme was a discussion on the European Research Council (ERC), which was chaired by *Frank Gannon* and featured *Helga Nowotny*, Vice-Chair of the ERC Scientific Council and *Luc Van Dyck* of the European Life Sciences Forum (ELSF). Nowotny announced that the ERC's first funding call would reflect its support of young scientists. From 100,000 to 400,000 euro per year will be available for young investigators in the early stages of their independent scientific careers (see page 10 for more information on ERC grants).

Informal round-table sessions gave participants the chance to discuss recent developments with colleagues in their fields. Themes included trafficking, signalling, gene expression, structural biology, molecular medicine, plant biology, neurobiology and lab management.

These discussions also led to a number of proposals and decisions. Due to the growing size of the community, it was proposed

that satellite meetings be held each year in conjunction with the annual meeting. These smaller events will be organised by different groups, starting next year with the neurobiologists and plant biologists, and will replace the annual Young Investigator Programme Symposia. Aside from the young investigators, participants could include their students and other young independent scientists. Finally, to reflect the wide reach of the community within Europe, every third Young Investigator Meeting will be held outside EMBO at a European institute.

The annual meeting shows how the young investigator community has grown both in number and expertise over the years. It currently comprises 171 scientists – 159 young investigators and 12 EMBO/HHMI scientists and Startup Grant recipients. This network will continue to expand when the 2006 EMBO Young Investigators and Installation Grant recipients (see page 2) are announced this autumn.

■ [www.embo.org/yip](http://www.embo.org/yip)

## EMBO EVENTS 2006

## PRACTICAL COURSES (EUROPE)

- **Genome, transcriptome and miRNome analysis of single cells**  
27 August–1 September, Cologne, DE
- **Multidimensional NMR in structural biology**  
27 August–1 September, Il Ciocco, IT
- **Development and evolution of animals and plants**  
28 August–8 September, Tübingen, DE
- **Protein expression, purification and crystallization (PEPC5)**  
28 August–5 September, Hamburg, DE
- **Working with stem cells**  
30 August–6 September, Sheffield, UK
- **Ubiquitin and SUMO**  
5–11 September, Split, HR
- **Anatomy and embryology of the mouse**  
9–17 September, Zagreb, HR
- **Molecular approaches to evolution and development in co-operation with ZONNET**  
(Marie Curie Research Training Network)  
11–22 September, Naples, IT
- **Bioinformatics for mass spectrometry in proteomics**  
18–22 September, Geneva, CH
- **Molecular genetics of *Chlamydomonas***  
18–29 September, Geneva, CH
- **Multi-photon imaging of living cells and tissues**  
22–28 October, Munich, DE
- **Solution scattering from biological macromolecules**  
23–30 October, Hamburg, DE

## PRACTICAL COURSES (WORLD)

- **Gene expression analysis in diagnostic medicine**  
18–27 September, Quezon City, PH
- **Joint WHO-TDR/EMBO Course Genetic manipulation and RNA interference in African trypanosomes**  
27 November–16 December, Nairobi, KE

## LECTURE COURSES (EUROPE)

- **Joint FEBS/FEMS/EMBO Course Molecular basis of bacterial virulence and survival within infected hosts and in the environment**  
5–15 September, Spetses, GR
- **Joint FEBS/EMBO Course Fundamentals of modern methods of biocrystallography**  
6–13 October, Oeiras, PT

## LECTURE COURSES (WORLD)

- **Functional analysis of microbial genomes**  
24 October–4 November, Montevideo, UY

## WORKSHOPS (EUROPE)

- **Stemness: The bright and the dark side. Normal and cancer stem cells**  
20–22 September, Catanzaro, IT

WORKSHOPS (EUROPE) *cont.*

- **Joint FEBS/EMBO Workshop Spatial and temporal regulation of signalling**  
21–24 September, Oslo, NO
- **Hedgehog-Gli signalling in cancer and stem cells**  
30 September–4 October, Rome, IT
- **Systems biology meets chromatin function**  
12–15 October, Gosau, AT
- **EMBO members Workshop Frontiers of molecular biology**  
13–17 October, Sheffield, UK
- **Cell migration, tissue invasion and disease**  
14–17 October, Capri, IT
- **Joint FEBS/EMBO Workshop Programming pancreatic  $\beta$ -cells**  
18–22 October, Perello, El Tarragona, ES
- **Joint FEBS/EMBO Workshop Systems dynamics of intracellular communication – overcoming distance in signalling networks**  
29 October–2 November, Ein Gedi, IL

## WORKSHOPS (WORLD)

- **Human evolution and disease**  
7–9 December, Hyderabad, IN
- **Developmental mechanisms and disease models**  
14–17 December, Kanpur, IN

## CONFERENCE SERIES (EUROPE)

- **The molecular and cellular basis of regeneration and tissue repair**  
10–15 September, Ascona, CH
- **Macromolecular complexes in microbial pathogenesis, membrane trafficking & cell signalling**  
23–28 September, San Feliu de Guixols, ES
- **Protein transport systems: Protein targeting and translocation**  
30 September–5 October, Gdansk, PL

## CONFERENCES (EUROPE)

- **Joint FEBS/EMBO Conference Molecular and cell biology at Spetsai: Past, present and future – a 40 year anniversary**  
1–5 September, Spetses, GR
- **Molecular microbiology: Dynamics, evolution and expression of prokaryotic genomes**  
19–23 October, Heidelberg, DE

## ESF-EMBO SYMPOSIA

- **Bacterial networks: Joining the strengths of structural and systems biology to reach 'synthetic' biology**  
2–7 September, San Feliu de Guixols, ES
- **Stem cells in tissue engineering: Isolation, culture, characterization and applications**  
27 October–1 November, San Feliu de Guixols, ES

## COURSES, WORKSHOPS &amp; CONFERENCE SERIES

## MEETING TYPES

- Practical courses, workshops, conference series
- Support of plenary lectures by EMBO Members

## ELIGIBILITY

*Organisers*

- Scientists working in molecular biology or a related science

*Participants*

- All qualified researchers working in molecular biology or a related science

## AT A GLANCE

- Approximately 70 meetings sponsored annually attracting over 5,000 participants
- Maximum grant of €30,000 depending on budgetary requirements
- Free Online HelpDesk providing organisers with websites, online application systems and posters
- Travel grants for practical-course participants from selected countries

## ANNUAL APPLICATION DEADLINES

1 February, 1 August

*Plenary lecture applications are accepted throughout the year*

www.embo.org/courses\_workshops

Bi-annual application deadlines for organisers to apply for EMBO funds



EMBO Courses & Workshops

## Helping tomorrow's scientists make the grade

EMBO International Workshop on Science Education



How well is Europe preparing its next generation of scientists? Judging from a recent look at secondary education, the report card is not good.

Calculations based on OECD data\* suggest that in certain European countries, some 50–60% of all university students fail to graduate; and most countries reach a figure of over 30%. While reasons for this vary, there is general consensus, at least when it comes to science education, that secondary schools are not adequately preparing students for further study.

How does Europe begin to address this startling situation? One answer is by supporting and encouraging the teachers who are preparing students for university education. This was the aim of the fifth EMBO International Workshop on Science Education, held from 11–13 May 2006 in Heidelberg, Germany. Organised by EMBO's Science & Society Programme, this year's workshop focused on education policy in biology and how best to support students in their transition from secondary school to university.



Approximately 120 experienced biology educators, including over 60 secondary school teachers from all over Europe, attended the three-day workshop. They exchanged experiences on how to help their students develop the analytical, critical and creative thinking skills needed to continue with their studies and become good researchers. Scientific talks and practical hands-on experiments, organised by the European Learning Laboratory for the Life Sciences (ELLS) at EMBL, also gave participants the chance to learn and share new teaching techniques and materials with their colleagues.

Programme Manager, *Andrew Moore*, explains the impetus behind developing these annual workshops. "Regular opportunities for secondary school teachers to update skills are vital in order to help them stay motivated and deliver quality teaching. Now we are also addressing the improvement of biology education across Europe at a structural level: by encouraging exchange of experiences and best practices between people who help determine national educational policy."



The biological sciences are becoming increasingly cross-disciplinary. But at the same time, fewer young people are choosing to study mathematics, physics and chemistry in school, and these sciences are not sufficiently promoted as supporting disciplines to biology. Universities report that such a limited scientific background—a result of inadequate classroom experience in secondary school—is not enough does not prepare students sufficiently for the study of modern biology.

Preparing tomorrow's scientists for a future in research means giving them the necessary skills and experience before they graduate from secondary school. EMBO hopes that supporting the professional development of secondary school science teachers will help them to provide these skills and awaken a renewed enthusiasm in their students.

■ [www.embo.org/scisoc/education.html](http://www.embo.org/scisoc/education.html)

**Teaching resources from past workshops**

■ [www.embo.org/scisoc/past\\_workshops.html](http://www.embo.org/scisoc/past_workshops.html)

**Teachers' resource database**

■ [www.embo.org/scisoc/teachers\\_db.php](http://www.embo.org/scisoc/teachers_db.php)

\*Ref: Education at a Glance, 2005, OECD

## Words speak volumes

Winner of EMBO mobility writing competition

The importance of language in acclimatising to a new culture is cleverly illustrated by the winning entry in the 2006 EMBO Life Sciences Mobility Portal writing competition. Written by



French post-doc, *Stéphanie Thébault*, "A short introduction to the Dutch language" reveals the significance of communication in integrating successfully into a new culture. Stéphanie moved from France to the Netherlands on an EMBO Long-Term Fellowship in 2005.

Focussing on five simple words, Stephanie provides a witty account of life and work in the

Netherlands. She quickly learns how to use 'korting' or 'discount' – a must for any post-doc. 'Gezellig' holds the key to communication and networking in the lab, an 'agenda' helps 'gezelligheid' to continue after hours and 'lekker' or 'leuk' feature in just about every conversation. As Stéphanie explains: "Dutch people are, by nature I decided, optimistic. Everything is nice. And it has to be expressed. Wat leuk when you open a birthday present, wat leuk when you wear something nice. Get prepared to be "wat-leuk-ed" at any instance."

French-born Stéphanie is in the second year of her post-doc at the Nijmegen Centre for Molecular Life Sciences (NCMLS) in the Netherlands. Her research focuses on the

characterization and regulation of the TRPM6 channel in the kidney. Stéphanie's move to NCMLS brought her from the INSERM Laboratory of Cellular and Molecular Physiology in Villeneuve D'Ascq, France.

This year's competition attracted over 40 entries, all of which offer useful information, advice or simply encouragement on moving to a variety of different countries. All of the essays are available on the EMBO Life Sciences Mobility Portal, alongside a comprehensive database of funding, training and job opportunities in Europe.

■ <http://mobility.embo.org>



## EDITOR PICKS – EMBO PUBLICATIONS

In each issue of *EMBOencounters*, the editors of *The EMBO Journal*, *EMBO reports* and *Molecular Systems Biology* highlight particularly interesting papers.



**HIV and the chemokine system:  
10 years later**

Paolo Lusso

*The EMBO Journal* 25: 447–456  
(08 Feb 2006)

**The expanding transcriptome:  
the genome as the 'Book of Sand'**

Luis M Mendes Soares, Juan Valcárcel

*The EMBO Journal* 25: 923–931  
(08 Mar 2006)

**ATM and ATR promote Mre11  
dependent restart of collapsed  
replication forks and prevent  
accumulation of DNA breaks**

Kristina Trenz, Eloise Smith, Sarah Smith,  
Vincenzo Costanzo

*The EMBO Journal* 25: 1764–1774  
(19 Apr 2006)

**Mba1, a membrane-associated  
ribosome receptor in mitochondria**

Martin Ott, Martin Prestele, Heike  
Bauerschmitt, Soledad Funes, Nathalie  
Bonnefoy, Johannes M Herrmann

*The EMBO Journal* 25: 1603–1610  
(19 Apr 2006)

**Dual role of the exocyst in AMPA  
receptor targeting and insertion into  
the postsynaptic membrane**

Nashaat Z Gerges, Donald S Backos,  
Chamila N Rupasinghe, Mark R Spaller,  
José A Esteban

*The EMBO Journal* 25: 1623–1634  
(19 Apr 2006)

**Tip60 and p400 are both required  
for UV-induced apoptosis but play  
antagonistic roles in cell cycle  
progression**

Sandrine Tyteca, Marie Vandromme,  
Gaëlle Legube, Martine Chevillard-Briet,  
Didier Trouche

*The EMBO Journal* 25: 1680–1689  
(19 Apr 2006)

[www.embojournal.org](http://www.embojournal.org)



*science & society*

**Through a glass darkly**

Les Grivell

*EMBO reports* 7: 567–570  
(01 Jun 2006)

**Private ownership of public heritage**

Andrea Rinaldi

*EMBO reports* 7: 571–575  
(01 Jun 2006)

*reviews*

**Twenty years of nuclear receptors  
Conference on Nuclear Receptors:  
From Chromatin To Disease**

Laszlo Nagy, Roland Schüle,  
Hinrich Gronemeyer

*EMBO reports* 7: 579–584  
(26 May 2006)

**The gut flora as a forgotten organ**

Ann M O'Hara, Fergus Shanahan

*EMBO reports* 7: 688–693  
(01 Jun 2006)

*scientific reports*

**Tumour necrosis factor receptor 1  
mediates endoplasmic reticulum  
stress-induced activation of the  
MAP kinase JNK**

Qingfeng Yang, You-Sun Kim, Yong Lin,  
Joseph Lewis, Len Neckers, Zheng-Gang Liu

*EMBO reports* 7: 622–627  
(05 May 2006)

**Homeostatic regulation of supercoiling  
sensitivity co-ordinates transcription  
of the bacterial genome**

Nicolas Blot, Ramesh Mavathur,  
Marcel Geertz, Andrew Travers,  
Georgi Muskhelishvili

*EMBO reports* 7: 710–715  
(16 Jun 2006)

[www.emboreports.org](http://www.emboreports.org)



*research articles*

**Deciphering principles of transcription  
regulation in eukaryotic genomes**

Dat H Nguyen, Patrik D'haeseleer

*Molecular Systems Biology*

doi:10.1038/msb4100054  
(18 Apr 2006)

**Adaptively inferring human  
transcriptional subnetworks**

Debopriya Das, Zaher Nahlé,

Michael Q Zhang

*Molecular Systems Biology*

doi:10.1038/msb4100067  
(06 Jun 2006)

**Oscillations and variability in  
the p53 system**

Naama Geva-Zatorsky, Nitzan Rosenfeld,

Shalev Itzkovitz, Ron Milo, Alex Sigal,

Erez Dekel, Talia Yarnitzky, Yuvalal Liron,

Paz Polak, Galit Lahav, Uri Alon

*Molecular Systems Biology*

doi:10.1038/msb4100068  
(13 Jun 2006)

**Putative regulatory sites unraveled by  
network-embedded thermodynamic  
analysis of metabolome data**

Anne Kümmel, Sven Panke,

Matthias Heinemann

*Molecular Systems Biology*

doi:10.1038/msb4100074  
(20 Jun 2006)

*review*

**Synthetic biology:  
new engineering rules for  
an emerging discipline**

Ernesto Andrianantoandro, Subhayu Basu,

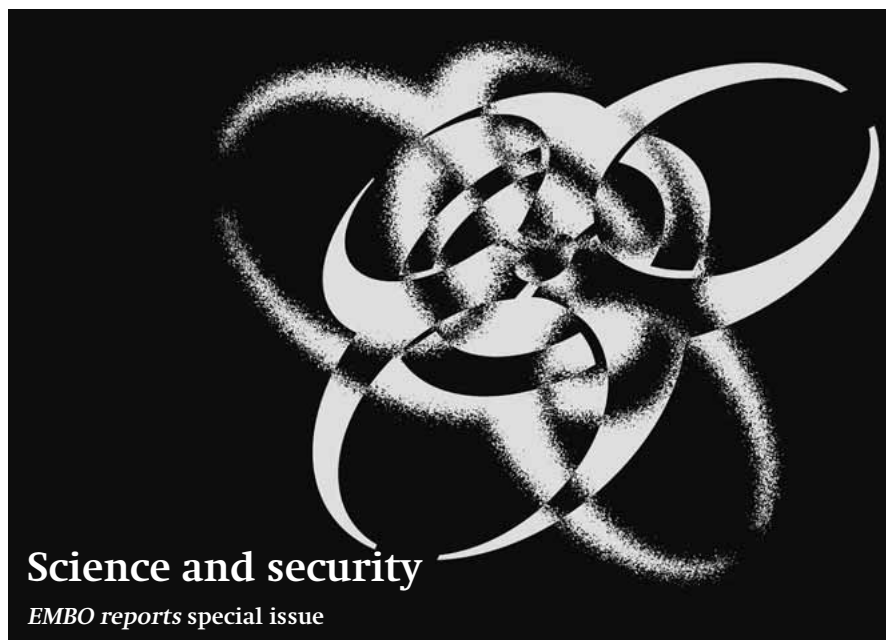
David K Karig, Ron Weiss

*Molecular Systems Biology*

doi:10.1038/msb4100073  
(16 May 2006)

[www.molecularsystemsbiology.com](http://www.molecularsystemsbiology.com)





## Science and security

EMBO reports special issue

The contributions of science to security, and the security of science itself, have rarely been more topical than now. Nor has it ever been more urgent to address the dual-use nature of research in order to minimise the possibility that biological information will be misused.

In a special issue of *EMBO reports* on 'Science & Security', published in July 2006,

internationally renowned experts present their knowledge, perspectives and opinions in 14 new articles. Based on talks presented at the 2005 joint EMBL/EMBO Conference on Science and Security, the special issue focuses on privacy and new technology, the dangers of abusing science, as well as possible codes of conduct for scientists.

### Contributors to this special issue include:

**Jan van Aken**, University of Hamburg:

*When risk outweighs benefit.*

**Philip Campbell**, Editor-in-Chief of *Nature*:

*Empowerment and restraint in scientific communication.*

**Jeanne Guillemin**,

Massachusetts Institute of Technology:

*Scientists and the history of biological weapons.*

**Irving Louis Horowitz**, Rutgers University:

*Privacy, publicity and security: the American context*

**Jonathan B. Tucker & Craig Hooper**,

Center for Nonproliferation Studies:  
*Protein engineering: security implications.*

**Eckard Wimmer**, Stony Brook University:

*The testtube synthesis of a chemical called Poliovirus.*

## Explaining the science behind the headlines

EMBO/EMBL

Science Writing Prize 2006

It's time again for Europe's young scientists to show off their creative writing skills in the 2006 EMBO/EMBL Science Writing Prize. For the first time, this year's prize is being jointly organised by EMBO and EMBL.

All life scientists who are working in Europe and are 35 or younger at the time of submission are invited to participate. The award recognises science writing excellence in communicating a topical issue to a non-scientific audience.

This year's winner will receive 1,000 euro plus one year's free subscription to *EMBO reports*. The young researcher will also be invited to present the winning entry at the EMBL PhD Symposium and the essay will be published in the symposium conference book.

Evaluating the entries will be a multinational jury including EMBL PhD students, EMBO Members as well as EMBO and EMBL staff. The judges will be looking specifically for well-written and engaging essays that are innovative enough to catch the attention of a non-scientific audience.



Competition organisers (left to right): *Fabian Filipp* and *Lindsay Murrells* of EMBL with EMBO's *Andrew Moore* and *Sandra Bendiscioli*

### More information and eligibility criteria

■ [www.embo.org/scisoc/writing\\_prize.html](http://www.embo.org/scisoc/writing_prize.html)

### General communication tips for scientists

■ [www.embo.org/scisoc/tips.html](http://www.embo.org/scisoc/tips.html)

### Annual application deadline

**15**  
September

EMBO/EMBL  
Science Writing  
Prize

'Science & Security' is the fourth special issue produced by *EMBO reports*. Former special issues covered the topics 'Infectious Diseases' (2003), 'Science & Risk' (2004) and 'Time & Ageing' (2005).



## ERC takes its first steps

An inside view by EMBO Member, Leena Peltonen

The initiation of the European Research Council (ERC) was an uphill battle, but after major input from many in the European research community, it is finally becoming a reality. As a member of the ERC Scientific Council, I share the responsibility for preparing the long-term strategy of the ERC and supervising its operations in coming years.

Serving on the ERC Council has been one of the most fascinating experiences of my career. I am deeply impressed by the genuine desire of all members to create something unique and excellent that will improve the working environment of European researchers – not only through new funding instruments but also via excellence-based selection that sets quality benchmarks for academic research on this continent. There have been no self-serving echoes of members' home countries or research fields in Council discussions. A collective European strength and excellence in research has been the overriding passion of all members.

### The story so far

Initial meetings of the ERC Council were guided by documents from the scientific community and produced rapid crystallization of the expectations of European researchers.

#### ERC Scientific Council Members

- Claudio Bordignon (IT)
- Manuel Castells (ES)
- Paul J. Crutzen (NL)
- Mathias Dewatripont (BE)
- Daniel Esteve (FR)
- Pavel Exner (CZ)
- Hans-Joachim Freund (DE)
- Wendy Hall (UK)
- Carl-Henrik Heldin\* (SE)
- Fotis C. Kafatos\* (GR)
- Michal Kleiber (PL)
- Norbert Kroo (HU)
- Maria Teresa V.T. Lago (PT)
- Oscar Marin Parra\*\* (ES)
- Robert May (UK)
- Helga Nowotny (AT)
- Christiane Nüsslein-Volhard\* (DE)
- Leena Peltonen-Palotie\* (FI)
- Alain Peyraube (FR)
- Jens R. Rostrup-Nielsen (DK)
- Salvatore Settis (IT)
- Rolf M. Zinkernagel\* (CH)

\*EMBO Member, \*\*EMBO Young Investigator

Scientists wanted bottom-up selection of research projects driven by research creativity and not by thematic areas of targeted programmes. Scientists wanted to see European talent used to maximum benefit with a funding system based on scientific excellence and a fair and transparent peer-review evaluation. They wanted less bureaucracy and more substance in the grant submission phase, more flexibility in the contractual aspects of grants, as well as professional and efficient management of funds by the EU funding agency.

### First actions

With these expectations in mind, the Scientific Council worked closely with EU officials and the office of Commissioner *Janez Potočnik*. In monthly meetings, the Council designed guidelines for the ERC's evaluation and management structure. To keep the scientific community informed, the Council launched its strategy on the ERC website and held meetings in different EU countries – most recently in Vienna and Helsinki to reflect the changing sites of the EU Presidency. Currently, the ERC is also in the process of selecting the first secretary general to lead the funding agency. This will be a crucial and challenging job, and selecting the right person is an important task for the scientific council.

Two major funding streams have been agreed upon and the first calls will be issued at the end of 2006. The first stream is "Starting Independent Researcher Grants", targeted at investigators trying to establish and strengthen their independent research. The second stream will be "Advanced Investigators Grants" for excellent investigators who are already established in Europe. Since the ERC budget for the first two years is limited to approximately 300 million euro annually for all areas of research, the first call will be targeted solely at early-stage investigators. These two funding streams will form the core of operations for the duration of the 7th Framework Programme.

### What next?

The Scientific Council is aware of the tremendous challenge of the first call. The number of proposals and the proportion of applications in different research areas is hard to predict, and this could create some logistical problems. We will make every effort to ensure that the evaluation process is as rapid, professional and transparent as possible. Evaluation of



**Make sure that you ...  
let the Scientific Council  
hear the voice of scientists.  
Be shameless and relentless  
in your feedback and let  
your opinions shape the  
strategic decisions and  
day-to-day running of  
the ERC.** *Leena Peltonen*

proposals will take place in panels, comparable to NIH or NSF study sections, with 15–20 panels covering all areas of research. National research organisations have been asked to nominate candidates to serve as panel chairs and experts. The names of all panel members selected by the Scientific Council will be made public. The Council will supervise and guide these panels, making the final decisions on funding recommendations.

### Advice and feedback

This initial call will be the ERC's first real test and determine its acceptance and credibility in the eyes of the scientific community and decision-makers in Europe and around the world. It is clear that the ERC can only be effective in improving European science and innovation if it gains the full trust of the research community. Its success is of paramount importance for the future of Europe and we cannot fail in this mission. Make sure that you, as research professionals, let the Scientific Council hear the voice of scientists. Be shameless and relentless in your feedback and let your opinions shape the strategic decisions and day-to-day running of the ERC. The future of European innovation is in our heads and hearts and together we can bring about a distinct improvement in the funding of basic science in Europe.

### ERC information and feedback

■ <http://ec.europa.eu/erc>

## Striving for a better quality of later life

New research focus for Jena institute



Werner Maas shows a photo of Fritz Lipmann during his talk

Why do some people maintain good health well into old age, while others fall prey to debilitating illnesses? This is the central question driving scientists at the Leibniz Institute for Age Research – Fritz Lipmann Institute (FLI) in Jena, Germany. Formerly known as the Institute for Molecular Biotechnology (IMB), the FLI not only has a new name and a radically new research theme, it also has a new director in EMBO Member, *Peter Herrlich*.

The FLI is part of the Leibniz Association and the first German institute to be dedicated solely to research into the molecular mechanisms of ageing and associated diseases. Officially opened in November 2005, the new centre fuses the genome science expertise of the former IMB with new research groups to search for genes that determine life-span and explore chromosome instability in ageing. Equally important will be studies on the mechanisms of organ dysfunction in diseases such as Alzheimer's and Parkinson's.

A major goal for the FLI will be to pool their research efforts on a European scale, interacting with a network of institutes specialising in age research. A pre-cursor to this will be a national network – linking FLI with the forthcoming Max Planck Institute for Age Research, institutions in Heidelberg and Tübingen, and other German research centres. Again the key aim will be to build and share expertise in this vital area.

The transformation from IMB to FLI and the reorientation of the new institute's research scope was supported by a number of EMBO

Members on the FLI Board of Trustees and Scientific Advisory Board, including *Adriano Aguzzi, Piet Borst, Hermann Bujard, Fritz Eckstein, Ingrid Grummt, Rolf Knippers* and *Kai Simons*.

■ [www.fli-leibniz.de](http://www.fli-leibniz.de)



*Peter Herrlich*, Scientific Director of the FLI

## Bridging the gap from the bench to the bedside

New centre for translational infection research

The road from the lab to the clinic can be long. A new institute from the Helmholtz Centre for Infection Research (formerly known as the GBF) and the Hanover Medical School (MHH) hopes to change this. Brainchild of EMBO Member, *Rudi Balling*, Scientific Director of the Helmholtz Centre and *Dieter Bitter-Suermann*, MHH President, the centre will unite infection biology researchers and clinicians in the fight against infection.

The aim of the joint institute, which will aptly be christened "Twincore", is to accelerate the development of bench discoveries into clinical therapies. "Joint research groups will bring together basic researchers from the Helmholtz Centre with MHH clinicians," explains Rudi Balling. "Pooling this expertise under one roof, we can identify infection problems in the clinic more effectively and reach faster solutions." An infrastructure that closely integrates the researchers will break down physical and scientific barriers that can slow the drug development process.

Working together, the research groups hope to find solutions that will directly impact



The new institute will be housed in the building currently occupied by the Max Planck Institute for Experimental Endocrinology in Hanover, Germany.

patient care. As a recognised clinic for transplant medicine, the MHH has crucial experience in infectious diseases. Weakened immune systems in transplant patients make them easy prey for infections. MHH clinicians deal with these infections on a daily basis and have

hands-on experience of the problems encountered during treatment. On the GBF side, experienced infection biology researchers will bring new scientific methods and technologies to the equation.

Twincore will concentrate on topics already under investigation at the MHH and the Helmholtz Centre. A key focus will be chronic infections, which currently represent two thirds of all infections and are extremely difficult to treat. Other projects will target antibiotic-resistant bacteria and specifically biofilms – bacterial colonies that put up a collective, powerful defence against antibiotics. Twincore hopes to exert a strong counter-attack when it opens its doors in 2007.

■ [www.helmholtz-hzi.de](http://www.helmholtz-hzi.de)

■ [www.mh-hannover.de](http://www.mh-hannover.de)



## Double helix to house European training centre

New training centre for EMBL



Architekten Bernhardt & Partner

A unique Advanced Training Centre (ATC) in the shape of a double helix will soon become the newest attraction on EMBL's campus in Heidelberg, Germany. The new centre will combine cutting-edge facilities for practical laboratory courses and computer training with the infrastructure to stage international conferences.

The project has been made possible by generous contributions from EMBL-Heidelberg's host country, Germany, and the Klaus Tschira

Foundation. Additional support comes from the state government of Baden-Württemberg. The ATC will host conferences and training activities aimed at scientists at various stages of their careers, as well as members of the public.

Construction work on the new centre will start in October this year and is due to finish in autumn 2008. The core of the new building will feature a 450-seat auditorium, exhibition space for 300 posters, teaching laboratories for

60 participants and a computer training lab. In addition, there will be extensive office space, three seminar rooms and numerous meeting rooms for use by course and conference participants, as well as EMBL staff.

"Such facilities are urgently required because conferences organised by EMBL, and frequently funded by EMBO, enjoy an excellent reputation worldwide. Demand is high and in the past four years, a third of all applicants have had to be turned down due to lack of space. Similarly, up to 80% of practical course applicants had to be disappointed for the same reason," says EMBL's Associate Director and EMBO Member, *Matthias Hentze*.

Apart from logistics, there is a wider need for a central base for scientific exchange in Europe. "European research in the life sciences is no longer confined by geographical or disciplinary borders," says *Iain Mattaj*, Director General of EMBL and EMBO Member. "Communication between scientists is more important than ever to make the latest research and training in the most advanced technologies broadly available. The ATC will help to make cutting-edge research and top-quality conferences more accessible to Europe's scientific community."

■ [www.embl.org](http://www.embl.org)

## Signalling by the seaside

5th Dubrovnik meeting on cell signalling

In an inspiring location set high above the Croatian coastline, over 300 scientists gathered for the fifth in a series of cell signalling conferences. Held from 26 May to 1 June in the ancient town of Cavtat near Dubrovnik, this was the first of the series to be sponsored as a FEBS Special Meeting. Another first for this year's meeting was an EMBO media communication session. EMBO also supported a plenary lecture by EMBO Member and Nobel Laureate, *Aaron Ciechanover*.

Organised by EMBO Member, *Ivan Dikic*, the main aim of the Dubrovnik meetings is to bring together Central and Eastern European researchers with international experts in the field. Now in their eighth year, the conferences have become an important source of networking and training for European researchers. At the 2006 meeting, scientists and students came together to discuss the latest develop-

ments in the field and to hear from an impressive line-up of speakers, many of whom were EMBO Members or former EMBO Young Investigators.

The range of topics covered at the conference reflected the breadth of the field and the increasingly integrative approach in current research. Presentations centred on cell signalling in disease, new therapeutic interventions, signalling networks, receptor endocytosis and the regulation of cell cytoskeleton and protein degradation. This interdisciplinary approach brought together experts from many different areas including mouse genetics, *Drosophila* genetics, biochemistry, crystallography and cancer research. The latter was also the focus of a special session on new trends in the area.

On the final day of the conference, EMBO offered an afternoon of science communication and media training. Organised by *Andrew*

*Moore*, EMBO Science & Society Programme Manager, participants learned about the pitfalls of science reporting and what scientists can do to ensure research is communicated effectively and reliably. EMBO Member, *Chris Leaver* presented a picture of the media-intensive debate surrounding genetic modification. Interviews with journalists from the leading Croatian newspaper and TV station gave participants a chance to experience what it's really like to be put on the spot by the media.

The sixth in the Dubrovnik conference series, a FEBS Special Meeting on Molecular Signalling, will be held from 29 May to 4 June 2008. *Ivan Dikic* and fellow EMBO Member, *Yosef Yarden* are also among the organisers for an upcoming EMBO Practical Course on ubiquitin and SUMO from 5–11 September in Split, Croatia.

■ <http://www.dubrovnik-conference.org>

## In the mind's eye

Imagining the Brain initiative



They say a picture speaks a thousand words, but can it also speak a thousand thoughts? This was the challenge facing entrants in the 2006 "Imagining the Brain" competition organised by EMBO Member, *Harvey McMahon* from the Neurobiology Division of the Medical Research Council Laboratory of Molecular Biology (LMB) in Cambridge, England.

Now in its second year, Imagining the Brain brings a fresh perspective to neurobiology research at the LMB, inspiring local Sixth Form pupils studying art and science to communicate complex scientific ideas in a single image. This year's winning entry by *Jessica Thurlbourn*, aptly entitled "Broken Thoughts", provides a novel representation of a disconnected neural network in the brain of an artist painting a self-portrait.

As with the 2005 competition, the winner will carry out a summer placement as "artist in residence" in the Neurobiology Division of the LMB. Artwork will also be commissioned from runners-up. The artists will work closely with researchers to produce innovative artwork that effectively illustrates current developments in the lab. The images will be used for conferences, public science events, journal covers or book illustrations.

■ [www.endocytosis.org/ImaginingTheBrain](http://www.endocytosis.org/ImaginingTheBrain)

"Broken Thoughts" by 2006 winner, *Jessica Thurlbourn* (top) and "The Mind of a REAL Teenager" by *Sara Green* (bottom)

### EVENT UPDATES FROM THE EMBO COMMUNITY

#### **MPSA 2006: 16th Meeting of Methods in Protein Structural Analysis**

29 August – 2 September, Lille, FR

*Joël Vandekerckhove*

[www.mpsa2006.com](http://www.mpsa2006.com)

#### **Neurodegenerative Diseases: Molecular Mechanisms in a Functional Genomics Framework**

6–9 September, Berlin, DE

*Hans Lehrach, Ulrich Hartl*

[www.smp-protein.de/](http://www.smp-protein.de/)

[SMPCConference/home.htm](http://SMPCConference/home.htm)

#### **2nd EuroStemCell International Conference: Advances in Stem Cell Research**

8–10 September, Lausanne, CH

*Austin Smith*

[www.eurostemcell.org](http://www.eurostemcell.org)

#### **1st International MUGEN Conference on Animal Models for Human Immunological Disease**

10–13 September, Athens, GR

*George Kollias*

[www.mugen.2006athens.gr](http://www.mugen.2006athens.gr)

#### **EuroBio 2006: Tenth European Biotech Crossroads**

25–27 October, Paris, FR

*Axel Kahn*

[www.eurobio2006.com](http://www.eurobio2006.com)

#### **Targeting the Kinome**

4–6 December, Basel, CH

*Brian A. Hemmings*

[www.targeting-the-kinome.org](http://www.targeting-the-kinome.org)

## ■ research

**Coping with cold: The genome of the versatile marine *Antarctica* bacterium *Pseudoalteromonas haloplanktis* TAC125**

Claudine Médigue, Evelyne Krin, Géraldine Pascal, Valérie Barbe, Andreas Bernsel, Philippe N Bertin, Frankie Cheung, Stéphane Cruveiller, Salvino D'Amico, Angela Duilio, Gang Fang, Georges Feller, Christine Ho, Sophie Mangenot, Gennaro Marino, Johan Nilsson, Ermenegilda Parrilli, Eduardo P C Rocha, Zoé Rouy, Agnieszka Sekowska, Maria Luisa Tutino, David Vallenet, Gunnar von Heijne, Antoine Danchin  
*Genome Research* **15**: 1325–1335  
(Oct 2005)

**Induction, suppression and requirement of RNA silencing pathways in virulent *Agrobacterium tumefaciens* infections**

Patrice Dunoyer, Christophe Himber, Olivier Voinnet  
*Nature Genetics* **38**: 258–263  
(Jan 2006)

**Toward automatic reconstruction of a highly resolved tree of life**

Francesca D. Ciccarelli, Tobias Doerks, Christian von Mering, Christopher J. Creevey, Berend Snel, Peer Bork  
*Science* **311**: 1283–1287  
(Mar 2006)

**GIN5 maintains association of Cdc45 with MCM in replisome progression complexes at eukaryotic DNA replication forks**

Agnieszka Gambus, Richard C Jones, Alberto Sanchez-Diaz, Masato Kanemaki, Frederick van Deursen, Ricky D Edmondson, Karim Labib  
*Nature Cell Biology* **8**: 358–366  
(Apr 2006)

**Distinct roles for Sld3 and GIN5 during establishment and progression of eukaryotic DNA replication forks**

Masato Kanemaki, Karim Labib  
*The EMBO Journal* **25**: 1753–1763  
(Apr 2006)

**A Plant miRNA Contributes to Antibacterial Resistance by Repressing Auxin Signaling**

Lionel Navarro, Patrice Dunoyer, Florence Jay, Benedict Arnold, Nihal Dharmasiri, Mark Estelle, Olivier Voinnet, Jonathan D G Jones  
*Science* **312**: 436–439  
(Apr 2006)

**B cell ligand discrimination through a spreading and contraction response**

Sebastian J Fleire, J. P. Goldman, Yolanda R Carrasco, M. Weber, Dennis Bray, Facundo D Batista  
*Science* **312**: 738–741  
(May 2006)

**Polar PIN localization directs auxin flow in plants**

Justyna Wisniewska, Jian Xu, Daniela Seifertová, Philip B Brewer, Kamil Ruzicka, Ikram Blilou, David Rouquié, Eva Benková, Ben Scheres, Jirí Friml  
*Science* **312**: 883  
(May 2006)

**PIN proteins perform a rate-limiting function in cellular auxin efflux**

Jan Petrásek, Jozef Mravec, Rodolphe Bouchard, Joshua J Blakeslee, Melinda Abas, Daniela Seifertová, Justyna Wisniewska, Zerihun Tadele, Martin Kubes, Milada Covanová, Pankaj Dhonukshe, Petr Skupa, Eva Benková, Lucie Perry, Pavel Krecek, OK Ran Lee, Gerald R Fink, Markus Geisler, Angus S Murphy, Christian Luschnig, Eva Zazimalová, Jirí Friml  
*Science* **312**: 914–918  
(May 2006)

## ■ books

**Köhler's Invention**

(Birkhäuser, ed. 2005)

by Klaus Eichmann

The publisher says: "Georges Köhler was one of the most prominent German scientists of recent history. In 1984, at the age of 38, he received the Nobel Prize in Physiology or Medicine...for inventing the technique for generating monoclonal antibodies...His unfortunate premature death in 1995 set an end to his extraordinary career. Prof. Klaus Eichmann, who had invited Köhler to become

his co-director, is one of the people who were closest to him. This scientific biography commemorates the 10th anniversary of Köhler's untimely death. Köhler's scientific achievements are explained in a way to make them understandable for the general public and discussed in the historical context of immunological research."

**An Introduction to Systems Biology: Design Principles of Biological Circuits**

(Chapman & Hall/CRC, ed. 2006)

by Uri Alon

Galit Lahav of Harvard Medical School says: "This is a remarkable book that introduces not only a field but a way of thinking. Uri Alon describes in an elegant, simple way how principles such as stability, robustness and optimal design can be used to analyze and

understand the evolution and behavior of living organisms. Alon's clear intuitive language and helpful examples offer—even to a mathematically naive reader—deep mathematical insights into biology. The community has been waiting for this book; it was worth the wait."



## AWARDS OF EXCELLENCE

## EMBO Members

**26th AACR Award for Outstanding Achievement in Cancer Research**

American Association for Cancer Research, US

*Ivan Dikic* for his groundbreaking contribution to the field of growth factor receptor signalling

**Abraham Spector Prize 2006**

Columbia University, US

*Arne Holmgren* for his fundamental research on thioredoxin and glutaredoxin systems

**2006 Benjamin Franklin Award in the Life Sciences**

Bioinformatics Organization, US

*Michael Ashburner* for his fundamental contributions to many open-access bioinformatics projects

**Dr H.P. Heineken Prize for Biochemistry and Biophysics 2006**

Royal Netherlands Academy of Arts and Sciences, NL

*Sir Alec Jeffreys* for his discovery of the genetic fingerprint

**2006 European Society of Human Genetics Prize**

*Veronica van Heyningen* for contributions to international human genetics

**Foreign Honorary Member: Biochemistry and Molecular Biology**

American Academy of Arts and Sciences, US

*Maurizio Brunori* for pre-eminent contributions to the field and society at large

**Le Grand Prix Inserm 2005, FR**

*Bernard Malissen* for his landmark work in the area of immunology

**Le Prix d'Honneur Inserm 2005, FR**

*Jacques Glowinski* for his work on neurotransmission and the mechanisms of the action of psychotropic substances

**Le Prix étranger Inserm 2005, FR**

*Sir David Lane* for his work on the p53 gene

**Le Prix Inserm de Recherche 2005, FR**

*Pascale Cossart* for her research in physiopathology

**Louis-Jeantet Prize for Medicine 2006, CH**

*Kari Alitalo* for his pioneering work in the study of lymphangiogenesis

*Christine Petit* for her pioneering work in the study of hereditary deafness

**2006 March of Dimes Prize in Developmental Biology, US**

*Alexander Varshavsky* for his pioneering studies on ubiquitin and its biological functions

**Otto Naegeli Award 2006**

Bonizzi-Theler Foundation, CH

*Susan Gasser* for her groundbreaking analysis of the spatial structure and molecular composition of heterochromatin in living cells

**Science and Humanity Prize 2006**

Oxygen Club of California, US

*Arne Holmgren* for pioneering research

**2006 Waddington Medal**

British Society for Developmental Biology, UK

*Claudio Stern* in recognition of his outstanding research and services to the developmental biology community

## EMBO Young Investigators

**Balfour Lecture Award 2006**

Genetics Society, UK

*Olivier Voinnet* for contributions to genetics

**Prix Mergier-Bourdeix 2005**

French Academy of Sciences, FR

*Terence Strick* for decisive contributions to single molecule biology

**Lister Institute Research Prize 2006, UK**

*Daan van Aalten* (research funding award over a three-year period)

**Prix Victor Noury, Thorlet, Henri Becquerel, Jules et Augusta Lazare 2005,**

French Academy of Science, FR

*Olivier Voinnet* for his work on RNA silencing and viral suppression in plants and animals

## APPOINTMENTS

## EMBO Members

**Walter Birchmeier**

Scientific Director

Max Delbrück Center for

Molecular Medicine (MDC)

Berlin-Buch, DE

**Thomas Jentsch**

Head of Department of

Physiology and Pathology of Ion Transport

Leibniz Institute for Molecular Pharmacology

(FMP) & Max Delbrück Center for Molecular

Medicine (MDC)

Berlin-Buch, DE