

EMBO *encounters*

message from EMBO Executive Director

How EMBO works



The majority of the EMBO community will be familiar with the wide range of EMBO programmes that have been continuously monitored and developed over the years. How these changes come about, in other words "how EMBO works", is a less visible story.

To get a picture of the inner workings of EMBO, it is useful to look at the organisation as a triangle with interacting corners that initiate and modulate the various programmes. The three EMBO cornerstones are the Heidelberg-based management team, the EMBO Council and the various EMBO committees. Strong input also comes from the main funders of our activities, the member states of the European Molecular Biology Conference (EMBC). EMBC has a very direct influence on the progression of EMBO activities. Without its acceptance and support, EMBO could not deliver the range of opportunities it offers today.

Starting in the Heidelberg corner of the triangle, the managers and I meet regularly on a one-to-one basis and as a group. This means that the entire team is actively involved in putting together a range of programmes that meet the needs identified during internal reflections or discussions with external contacts – in particular the EMBO Members. The Heidelberg team is therefore not only the executor of the EMBO programmes; it also influences their direction.

The second essential component of the triangle is the EMBO committee system. Every EMBO activity is considered by a committee made up of EMBO Members. The committee structure ensures that no concepts coming from the EMBO management or the Council are acted upon without first going through the respective committee. As the committees operate in a more focused manner dealing with specific topics such as fellowships, their insight can be very telling and bring about important changes. The committees also have

the indispensable task of making the final decisions on applications for EMBO funding. In addition they fulfil the important role of advising on future developments within a programme.

The EMBO Council is the third fundamental cornerstone and carries the responsibility of ensuring that EMBO actions are in keeping with the needs and expectations of the membership. Council opinion carries great weight and no final decisions on EMBO activities are made without its consultation and guidance (see page 2). The Council reflects upon any major topics or new ideas emanating from management or committee discussions and also generates new ideas itself. In keeping with the triangle image rather than a hierarchical structure, Council deliberations also pass through the committees before implementation. Following this internal process, EMBC comes back into the picture to ensure that they agree with any new directions impacting the activities that they fund (see page 5).

Given the strong interconnectivity between the three corners of the triangle and externally with both the members and EMBC, the decision-making process could be tortuous. However, practice shows that this is not the case. EMBO's reputation for being flexible and responsive is well founded and long may this continue.

New EMBO Fellows join the fold

Autumn 2005 selection

Demand for EMBO Long-Term Fellowships remains high with a record number of eligible applications received in 2005. In the autumn 2005 selection, 98 candidates were chosen from 617 applications. The spring 2006 selection process is currently underway.

www.embo.org/fellowships

EMBO Fellows Meeting: 26–29 May 2006
www.embo.org/fellowships/fm06.html

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Bi-annual application deadlines:

EMBO Long-Term Fellowships

15 February

15 August

Annual meeting of the EMBO Council

Key results and decisions

On 4–5 October 2005, the annual meeting of the EMBO Council took place at the EMBO headquarters in Heidelberg. Every year the Council, made up of 15 EMBO Members, meets with the EMBO management to discuss and review the organisation's activities.

This year the meeting was hosted for the last time by *Susan Gasser*, whose term as Council Chair came to an end in December 2005 after six years of valued service. Her successor is *Tim Hunt*, who started his duties in January 2006. Elected Vice-Chair for the second year running was *Erik Boye*.

The annual meeting also saw the election of *Benny Shilo* to Council and the re-election for the period 2006–2008 of *Margaret Buckingham* and *Maciej Żylicz*. *Marjori Matzke* and *David Shore* were co-opted for the same period. Council also ratified changes to the membership of the various EMBO committees.

A number of decisions at the 2005 meeting centred on the EMBO Fellowship Programme. Reflecting on the lower success rate of female candidates in long-term fellowship applications, the Council accepted a proposal by the EMBO Fellowship Committee to assess all 2006 applications in a gender-neutral manner. In practice, this means that all reference to gender will be removed from application documents. The aim is to establish whether gender has any impact on selection.

On a similar theme, the Council agreed to EMBO's proposal to redirect its financial contribution to the long-term fellowships towards the provision of childcare support for female EMBO Fellows with pre-school children. This

move aims to encourage talented female scientists to remain active in research.

Discussion at the meeting also took a look forward at the long-term direction of EMBO. To give more attention to this important topic, a special meeting of the EMBO Council and EMBO managers will take place on 14–16 March 2006 in Zurich, Switzerland. Future scope and strategy will be the focus of this meeting with a concrete analysis of where EMBO should be in 2015.

The next ordinary meeting of Council will take place on **25–27 September 2006**.

www.embo.org/about_embo/council_committees.html

The EMBO Council
(as of January 2006)

- Anton Berns
- Erik Boye (Vice-Chair)
- Margaret Buckingham
- Roberto di Lauro
- Ingrid Grummt
- Tim Hunt (Chair)
- Daniel Louvard
- Carlos Martinez-A.
- Marjori Matzke
- Sean Munro
- Benny Shilo
- David Shore
- Kai Simons
- Gunnar von Heijne
- Maciej Żylicz



Tim Hunt, EMBO Council Chair as of January 2006

2006 deadlines:

30
April

EMBO Members:
Nominations
of Gold Medal
candidates

15
June

EMBO Members:
Nominations for
EMBO Council

15
June

EMBO Members:
Nominations for
2007 membership
election

Leading molecular biologists to meet in Sheffield

2006 EMBO Members Workshop

The next EMBO Members Workshop, *Frontiers of Molecular Biology*, will take place in Sheffield, UK from **13–16 October 2006**. Organised annually by an EMBO Member, this workshop is a unique networking opportunity bringing together scientists from all disciplines of molecular biology. Speakers at the meeting come from the EMBO membership, but participation is open to the entire scientific community.

The 2006 workshop will feature a range of talks by the EMBO Members who were elected to the organisation in 2005. This is a chance to meet these scientists and hear about exciting developments in their respective fields. This

year's meeting includes a mini-symposium on the topic of epigenetics with a plenary lecture by EMBO Member, *Adrian Bird*. By bringing together key scientists from this field, EMBO aims to promote and strengthen the epigenetics community.

Other highlights will include a special Science & Society "Media Communications" Workshop as well as a talk by the 2006 winner of the EMBO Gold Medal. A members' forum will also give the membership the opportunity to enter into direct dialogue with EMBO and discuss its activities.

EMBO Members Workshop 2006
(organised by EMBO Member, *Philip Ingham*)

<http://members2006.embo.org>

Speakers (EMBO Members elected in 2005)

www.embo.org/about_embo/press/new_members05.html

Deadline:

15
July

Registration
2006 EMBO
Members Workshop
in Sheffield

Spotlight on...

The EMBO Young Investigator Programme

Recognising and supporting tomorrow's scientific leaders

Young independent scientists often find themselves on the sidelines of European research. Talented and creative, but not yet sufficiently established, they have to fight hard for recognition and funding.

In the late 1990s, it was suggested that EMBO start a programme to support and encourage these young scientists as they establish their first labs and start to build their reputations. Although some national initiatives offered financial support, a broader European networking perspective was lacking. This is where EMBO came in with the launch of its Young Investigator Programme.

The first call for applications went out in 2000. Rather than simply providing funding, this unique programme focused its efforts on helping the EMBO Young Investigators develop the network they needed to become successful scientists. Six years later, the programme's worldwide reputation sends a clear message to national and international science organisations that these young scientists are worthy of support and recognition.

The programme invites applications from scientists who are within four years of setting up their first independent labs in Europe. New criteria also allow female applicants with children to extend this time period by one year per child. In addition, all applicants must have already published at least one research paper from their lab. Applicants can be of any nationality, but their labs must be located in one of the EMBO Member States (see page 5).

Although the number of scientists selected each year varies, generally 17–20 new young investigators join the programme annually, representing a success rate of 13%.

"It's a mark of excellence to be selected as an EMBO Young Investigator. These young scientists are conducting original research in their own labs using novel approaches and ideas. We expect them to become the scientific leaders of tomorrow," explains Gerlind Wallon, Young Investigator Programme Manager.

EMBO Young Investigators enjoy benefits not normally available to early career scientists. Lab management training and PhD courses offer the young group leaders and their students the chance to develop professional skills, while networking events such as the annual meeting and symposium introduce them to EMBO Members and other experts in their respective fields.

As with many of the programme's activities, young investigators are actively involved in the organisation and implementation of the symposium, which attracts expert speakers and focuses on wide-ranging topics such as quantitative biology, fluorescence microscopy and chemical biology. EMBO also supports "Young Investigator Lectures" at conferences around the globe. These talks raise awareness of both the scientists and the programme.

One unique benefit of the Young Investigator Programme is provided by EMBO Members who serve as personal mentors. The young investigators report that this support from an established scientist outside their institute is of enormous benefit. Increased publicity is another plus. Heads of funding agencies and scientific institutes receive a booklet every year that profiles the young investigators, while press releases and features on the EMBO website widen the exposure of the select group. Through these efforts, EMBO hopes to help the researchers increase their recognition and funding opportunities.

Young investigators are members of the programme for three years. A bi-monthly newsletter, networking support and an online database help current and former programme members stay in touch. Young investigators also give back to the EMBO community by participating in its activities. Along with the EMBO Members, the young investigators review fellowship applications and are also invited to annual EMBO Members Workshops and Sectoral Meetings. This involvement is of mutual benefit and helps to strengthen ties within the EMBO community.

Young investigators also benefit from the strong relationships EMBO has developed with organisations such as the European Molecular Biology Laboratory (EMBL), the Howard Hughes Medical Institute (HHMI) and the Human Frontier Science Program (HFSP). EMBL has been very supportive of the programme from the start, having acted as a reference lab for the young investigators and providing access to its core facilities and infrastructure.

In 2002, EMBO and HHMI teamed up to provide support to young scientists from Central European countries. A total of 17 scientists have benefited from this collaboration. In 2005, EMBO/HHMI Startup Grants were awarded to six scientists to help them establish their first independent laboratories in the Czech Republic, Estonia and Hungary. These grants are now



photo by Marietta Schupp, EMBL Photolab

Kim Piggott
Programme Administrator
Gerlind Wallon
Programme Manager

being extended through another EMBO initiative known as the Strategic Development Installation Grants. These grants will help scientists set up labs in participating member states, which, to date, include Croatia, the Czech Republic, Poland, Portugal and Turkey.

Supporting and networking Europe's best young scientists is the aim of the EMBO Young Investigator Programme. Its activities help to endorse these young scientists as active and recognised contributors to European research.

EMBO Young Investigator Programme

www.embo.org/yip

EMBO Strategic Development Installation Grants

www.embo.org/yip/sdig.html

2006 deadlines:

1
April

EMBO
Young Investigator
Programme

15
July

EMBO Strategic
Development
Installation Grants

Tell us your story

EMBO mobility writing competition

Do you have an interesting story to tell about moving abroad to a new lab? Then enter the EMBO Life Sciences Mobility Portal writing competition. Articles should be non-scientific in style. You can write about any relevant mobility issues and include the cultural, economic and bureaucratic challenges you had to overcome.

Prize: 500 Euro and publication on the EMBO Life Sciences Mobility Portal

For more details and information on rules and eligibility, e-mail mobility@embo.org. Winner of the 2005 competition: *Tariq Muhammad*

<http://mobility.embo.org>

2006 application deadline:

12
May

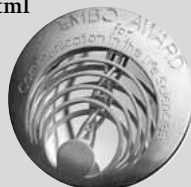
EMBO
»Write Move«
competition

2006 EMBO Award for Communication

Call for entries

Are you a scientist with a flair for communicating science? If so, you may be eligible to apply for the EMBO Award for Communication in the Life Sciences. Now in its fifth year, the award is presented annually to a practising life scientist in recognition of outstanding work in the public communication of science.

www.embo.org/awards/communications.html



2006 application deadline:

31
March

EMBO Award for
Communication in
the Life Sciences

Preparing students for a career in science

EMBO international workshop on science education

How well are school-leavers prepared for a university course in the biosciences? Have they learnt to think analytically and creatively at school, or are their heads merely jam-packed with facts?

On 11–13 May 2006, about 60 secondary school biology teachers from around Europe will learn how to help their students develop the knowledge and critical thinking skills they need to proceed with their studies and become good researchers. The focus of this year's workshop will be education policy in biology and the critical transition students experience as they make the leap from secondary school to university.

Scientific talks and practical hands-on experiments, organised by EMBL's European Learning Laboratory for the Life Sciences (ELLS) and ExploHeidelberg, will help participants learn new teaching techniques and share classroom materials with their colleagues. Themes covered at the workshop include student performance and expectations; curriculum design, teaching plans and

teaching methods; and positive developments in teaching and teacher training.

EMBO Members, *Geneviève Almouzni* and *Peer Bork* along with other scientists, will be on hand to discuss and demonstrate new ideas and help the teachers develop their course materials further. Researchers from the EMBO community are invited to meet these motivated teachers and share their expertise. Scientists interested in attending the event should e-mail scisoc@embo.org.

www.embo.org/scisoc/education.html

Teaching resources from past workshops

www.embo.org/scisoc/past_workshops.html

Educational resource database

www.embo.org/scisoc/teachers_db.php

Management training for young scientists

EMBO Lab Management Courses

Today's successful group leaders need to be more than just talented scientists, they should also be skilled managers. Hiring, managing and teaching staff is part of everyday life in the lab. However, since these skills are not taught during postdoctoral training, how do these young group leaders prepare themselves for the challenges of lab management?

The EMBO Young Investigator Programme tries to address this problem by providing lab management courses for its young investigators. Launched in 2004, these annual courses cover topics in the areas of staff selection, leadership, problem-solving and communication. Tailor-made to the needs of young scientists, the courses are continually assessed and developed in co-operation with a management consultant team.

In November 2005, the courses were opened to participants from outside the programme for the first time. A total of 32 group leaders participated in two four-day courses focusing on leadership, communication and conflict resolution. The small course size allowed for intensive training, effective role-play exercises and group discussion of individ-

ual cases. The participants were also joined by senior scientists who shared their own management experiences. EMBO Members, *Christof Niehrs*, *Ingrid Grummt*, *Michael Brunner* and *Peter Krammer* offered the young scientists some guidance and useful tips for dealing with leadership and conflict management issues.

»Today's successful group leaders need to be more than just talented scientists, they should also be skilled managers.«

This year, courses will also be offered to EMBO Fellows in the final year of their fellowship – preparing these young scientists for the future challenge of running their own labs.

2006 lab management courses:

EMBO Young Investigators	March, July
EMBO Fellows	October, November
Open course	June, October

www.embo.org/yip/lab_mgm.html



News from EMBC

Results of autumn 2005 meeting

The European Molecular Biology Conference (EMBC), the intergovernmental funding body of EMBO, meets twice annually. The second sitting of the 36th ordinary session took place on 21–22 November 2005 in Heidelberg, generating a number of interesting developments.

One major outcome of the meeting was the acceptance of an application by the Slovak Republic for EMBC membership, subject to the standard ratification process. On a similar note, EMBC discussed future interactions with South Africa. EMBC extended an offer of “co-operative status” to the country at its summer session in July 2005. The November meeting provided an opportunity for the member states to agree on a protocol for this co-operation. Formal steps to ratify South Africa’s membership will continue in 2006. On a more general level, EMBC looked at the timeline for ratification and decided that any country accepted for membership would be given a limit of 18 months to sign the EMBC Agreement.

The November session also saw progress with a special EMBC project, the Strategic Development Installation Grants. EMBC endorsed the establishment of this funding scheme at its summer 2005 meeting. The new grants will replace and expand upon the EMBO/HHMI Startup Grants, supporting researchers setting up laboratories in countries that are developing their science bases. Several member states showed interest in the scheme at the November meeting and Croatia, the Czech Republic, Poland, Portugal and Turkey have since confirmed their participation. EMBO will oversee and administer the new grants as part of its Young Investigator Programme.

Science policy was also a topic of discussion at the autumn meeting. In response to an earlier request by EMBC for expert input on science policy issues, EMBO organised a special hearing on the use of animals in research – currently topical due to an upcoming revision of an EU directive on the welfare of research animals. The delegates heard from scientific speakers about the current situation in Europe and the potential implications for biomedical research of any changes to the legislation.

EMBO Members, *Wolf Singer* and *Nadia Rosenthal*, outlined the state of affairs in their respective fields of neuroscience and mouse biology – the research areas likely to be most affected by changes to the directive. The scientists emphasised the need for policy-makers to involve researchers in the decision-making process and see them as a trusted and expert source of information. The EMBC Delegates welcomed the opportunity to hear from scientists directly affected by the legislation and asked that EMBO provide similar expert input on the topic of stem cells in 2006.

The 37th Ordinary Session of the EMBC (Part I) will take place on 3–4 July 2006.

www.embo.org/embc

Strategic Development Installation Grants

www.embo.org/yip/sdig.html

Special hearing on the use of animals in research

www.embo.org/about_embo/special_hearing.html

EMBC

EMBC officers 2006

President

■ **Marja Makarow** (Finland)

Vice-Presidents

■ **Kresimir Pavelic** (Croatia)

■ **Peter Weisbeek** (Netherlands)

Secretary General

■ **Frank Gannon**

Chair of

Financial Advisory Group

■ **Brita Beije** (Sweden)

Vice-Chair of

Financial Advisory Group

■ **Maria Jose Almeida** (Portugal)

Application deadline:

15
July

EMBO Strategic
Development
Installation Grants

EMBC MEMBER STATES



EMBC MEMBER STATES (year of ratification)

Austria (1970)	Greece (1972)	Portugal (1994)
Belgium (1970)	Hungary (1992)	Slovenia (1997)
Croatia (1998)	Iceland (1978)	Spain (1970)
Czech Republic (1994)	Ireland (1974)	Sweden (1969)
Denmark (1970)	Israel (1970)	Switzerland (1969)
Estonia (2006)	Italy (1972)	Turkey (1993)
Finland (1977)	Netherlands (1970)	United Kingdom (1970)
France (1970)	Norway (1970)	
Germany (1969)	Poland (1999)	

Special provisions also exist for **Cyprus**. Membership applications from **Luxembourg** and **Slovak Republic** have been accepted and are awaiting formal ratification.

EMBO events 2006

PRACTICAL COURSES (EUROPE)**Statistical methods for the identification of genes under natural selection**

15–19 May, Helsinki, FI

Structural characterization of macromolecular complexes

15–20 May, Grenoble, FR

Molecular genetics with the fission yeast *Schizosaccharomyces pombe*

11–21 June, Copenhagen, DK

Advanced techniques in molecular medicine

13–20 June, Uppsala, SE

Quantification of gene expression by qPCR

17–23 June, Heidelberg, DE

Plant cell biology

18–24 June, Wageningen, NL

The application of transient kinetics methods to biological macromolecules

18–24 June, Canterbury, UK

Joint FEBS/EMBO Course

Electron microscopy and stereology in cell biology

20–29 June, Oslo, NO

Advanced analysis and informatics of microarray data

25 June – 1 July, Hinxton, UK

Microinjection and detection of probes in living cells

25 June – 1 July, Heidelberg, DE

Biomolecular simulation

28 June – 5 July, Paris, FR

Flow cytometry and cell sorting

16–21 July, Berlin, DE

Cryo-electron microscopy and 3-D image analysis

13–22 August, Heidelberg, DE

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

PRACTICAL COURSES (WORLD)**Proteins as cellular nanomachines:****Molecular motors, channels & pumps**

(III. International Symposium on Myosin V)

8–19 May, Rio de Janeiro, BR

PROTEINS:**Structure, dynamics and energetics**

10–17 May, Shanghai, CN

Advances in technologies for high resolution *in vivo* microscopy.**From single molecule detection to functional studies**

6–18 August, Buenos Aires, AR

LECTURE COURSES (EUROPE)**Molecular and cellular cognition**

1–6 July, Venice, IT

Molecular mechanisms of development

2–7 July, Barcelona, ES

Joint FEBS/FEMS/EMBO Course

Molecular basis of bacterial virulence and survival within infected hosts and in the environment

5–15 September, Spetses, GR

WORKSHOPS (EUROPE)**Functional organisation of the cell nucleus**

5–8 May, Prague, CZ

Signals and mechanics in directed cell migration

18–20 May, Heidelberg, DE

Evolutionary biology of *Caenorhabditis elegans* and closely related species

23–27 May, Oeiras, PT

Principles of self-organisation in living matter

2–5 June, Heidelberg, DE

Cell membrane organisation and dynamics

3–7 June, Bilbao, ES

Plant virology 2006:**Suppression and circumvention of host defence by plant viruses**

1–5 July, Haikko, FI

The genomics of development

21–26 August, Arolla, CH

Cell cycle and cytoskeletal elements in bacteria

23–27 August, Copenhagen, DK

CONFERENCE SERIES (EUROPE)**Recombination mechanisms and the maintenance of genome stability**

15–19 May, Seillac, FR

Molecular and developmental biology of *Drosophila*

18–24 June, Kolybari, Crete, GR

The molecular and cellular basis of regeneration and tissue repair

10–15 September, Ascona, CH

CONFERENCES (EUROPE)

Joint HBR/COST B20/EMBO Conference

Common molecular mechanisms of mammary gland development and breast cancer progression

6–8 June, Dublin, IE

Joint FEBS/EMBO Conference

Molecular and cell biology at Spetsai: Past, present and future – a 40 year anniversary

1–5 September, Spetses, GR

ESF-EMBO SYMPOSIA**B cells cross the divide:****From *in silico* to the whole person**

13–18 May, San Feliu de Guixols, ES

Gene transcription in yeast

24–29 June, San Feliu de Guixols, ES

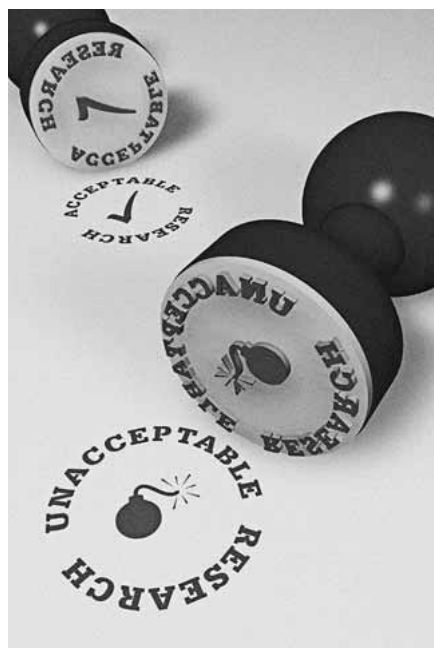
Bacterial networks: Joining the strengths of structural and systems biology to reach 'synthetic' biology

2–7 September, San Feliu de Guixols, ES

Next 2006 deadline for organisers to apply for EMBO funds:**1****August****EMBO courses, workshops, conferences and conference series**www.embo.org/courses_workshops

Is there a “right” kind of research?

6th EMBO/EMBL Science & Society Conference



Is there a type of research that simply should not be done? Jan van Aken of Hamburg University's Sunshine Project thinks so. He cites the artificial reconstruction of the genome of the 1918 influenza virus, which killed around 50 million people in the space of a year. The lethal virus died out as quickly as it appeared – until 2005, when it was resurrected by researchers from the US Armed Forces Institute of Pathology.

This is just one of the “Science and Security” themes that set the tone for the



Eckard Wimmer at the 2005 Science & Society Conference

annual EMBO/EMBL Science & Society Conference on 28–29 October 2005 in Heidelberg, Germany. Presentations covered issues that regularly hit the headlines and fuelled many a heated debate. The controversial topics ranged from bio-weapons and biometrics to security databases and restrictions on research. This brings us back to Van Aken. It is easy to understand why society might view the research on the 1918 flu virus as a threat, but what about its scientific merit? Here too van Aken was unforgiving, “I see no scientific reason, given the multitude of current, equally deadly viruses to research.”

Eckard Wimmer of Stony Brook University School of Medicine in New York had a different story to tell. Famous for his artificial synthesis of the polio virus in 2002, he took issue with Van Aken's comments, “I think you're dead wrong on that one. It's suspected that the

1918 virus was originally an avian flu, so it's very important to find out the source of its pathogenicity.” Indeed, the 1918 monster had an RNA polymerase that was hyperactive compared with normal influenza, leading to an elevated rate of replication. Researchers fear that the current H5N1 avian flu virus will have similar properties.

As in previous years, *EMBO reports* will publish a special issue focusing on the central themes of the conference. Abstracts and presentations from the conference can be found on the Science & Society pages of the EMBO website. A free copy of a DVD featuring conference talks is also available from scisoc@embo.org.

“Genes, brain/mind and behaviour” will be the theme of the next EMBL/EMBO Science & Society Conference on 3–4 November 2006.

www.embo.org/scisoc/conferences.html

Strengthening the neurobiology network

EMBO Sectoral Meeting

EMBO runs a number of activities that specifically support the individual research areas represented in its community. One such endeavour in recent years has been the EMBO Sectoral Meetings. These meetings bring EMBO Members together to discuss a specific research area that has been singled out as particularly timely or in need of support. The aim of these meetings is to foster links between EMBO Members specialising in these areas and to establish how EMBO can help support their research.

Neurobiology was the focus of the very first EMBO Sectoral Meeting held in 1999. Since then much has changed in the area and EMBO felt that a follow-up meeting was needed to renew contact between EMBO neu-

roscientists. 21–23 October 2005 saw twenty EMBO Members, six EMBO Young Investigators, fourteen EMBO Fellows and around sixty researchers from the local scientific community gather at the new Institute of Neuroscience (INA) in Alicante, Spain. The aim of the meeting was to strengthen neurobiology within the EMBO network as an area that is rapidly growing in importance and yet relatively under-represented in the EMBO membership.

Scientifically the meeting was certainly an invigorating event with exciting talks by EMBO Members and Young Investigators on topics such as developmental neurobiology, synaptic transmission and plasticity, neurobiology of degeneration and systems neurobiology.

Discussions on EMBO's role in promoting neurobiology and furthering research in the area were also lively and enlightening. All in all, the meeting served to both renew and crystallise links between EMBO neurobiologists. One positive outcome was the possibility of a future EMBO Conference Series devoted to neurobiology. The Alicante meeting also reminded EMBO Members of the need to nominate and elect neurobiologists to the membership in order to boost the field's representation.

The next EMBO Sectoral Meeting will focus on the highly topical field of virology and is planned for late 2006. More details will be available in the coming weeks.

www.embo.org/communities/groups.html

Editor picks – EMBO publications

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



Phosphorylation of ephrin-B1 via the interaction with claudin following cell–cell contact formation

Masamitsu Tanaka, Reiko Kamata, Ryuichi Sakai
The EMBO Journal 24: 3700–3711
(02 Nov 2005)

The GRIP1:IRF3 interaction as a target for glucocorticoid receptor-mediated immunosuppression

Michael M Reily, Carlos Pantoja, Xiaoyu Hu, Yurii Chinenov, Inez Rogatsky
The EMBO Journal 25: 108–117
(11 Jan 2006)

NF- κ B p50 promotes HIV latency through HDAC recruitment and repression of transcriptional initiation

Samuel A Williams, Lin-Feng Chen, Hakju Kwon, Carmen Ruiz-Jarabo, Eric Verdin, Warner C Greene
The EMBO Journal 25: 139–149
(11 Jan 2006)

A role for the Rab6A' GTPase in the inactivation of the Mad2-spindle checkpoint

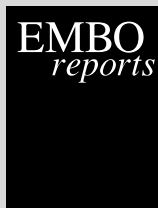
Stéphanie Miserey-Lenkei, Anne Couédel-Courteille, Elaine Del Nery, Sabine Bardin, Matthieu Piel, Victor Racine, Jean-Baptiste Sibarita, Franck Perez, Michel Bornens, Bruno Goud
The EMBO Journal 25: 278–289
(25 Jan 2006)

Want to find out more about *The EMBO Journal* editorial process?
Authors, reviewers and editors at *The EMBO Journal*

Pernille Rørth
The EMBO Journal 24: 3831
(16 Nov 2005)

www.nature.com/emboj/journal/v24/n22/full/7600851a.html

www.embojournal.org



science & society

Science and fundamentalism

Massimo Pigliucci
EMBO reports 6: 1106–1109
(01 Dec 2005)

Atlantic Storm

Daniel S Hamilton, Bradley T Smith
EMBO reports 7: 4–9
(01 Jan 2006)

review

Remodelling epithelial tubes through cell rearrangements: from cells to molecules

Marc Neumann, Markus Affolter
EMBO reports 7: 36–40
(01 Jan 2006)

Turnover in the Alps: an mRNA perspective

Workshop on Mechanisms and Regulation of mRNA turnover
Sarah F Newbury, Oliver Mühlemann, Georg Stoecklin
EMBO reports 7: 143–148
(01 Feb 2006)

scientific report

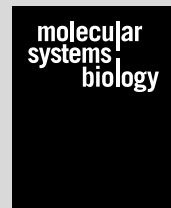
The wild-type *Schizosaccharomyces pombe* mat1 imprint consists of two ribonucleotides

Sonya Vengrova, Jacob Z Dalgaard
EMBO reports 7: 59–65
(01 Jan 2006)

A novel bipartite phospholipid-binding module in the neurofibromatosis type 1 protein

Igor D'Angelo, Stefan Welti, Fabien Bonneau, Klaus Scheffzek
EMBO reports 7: 174–179
(01 Feb 2006)

www.emboreports.org



Systems-level analyses identify extensive coupling among gene expression machines

Karolina Maciag, Steven J Altschuler, Michael D Slack, Nevan J Krogan, Andrew Emili, Jack F Greenblatt, Tom Maniatis, Lani F Wu
Molecular Systems Biology
doi:10.1038/msb4100045
(17 Jan 2006)

The proteomes of neurotransmitter receptor complexes form modular networks with distributed functionality underlying plasticity and behaviour

Andrew J Pocklington, Mark Cumiskey, J Douglas Armstrong, Seth G N Grant
Molecular Systems Biology
doi:10.1038/msb4100041
(17 Jan 2006)

Global analysis of gene function in yeast by quantitative phenotypic profiling

James A Brown, Gavin Sherlock, Chad L Myers, Nicola M Burrows, Changchun Deng, H Irene Wu, Kelly E McCann, Olga G Troyanskaya, J Martin Brown
Molecular Systems Biology
doi:10.1038/msb4100043
(17 Jan 2006)

Molecular Systems Biology, The Inaugural Collection



A collection of key papers published on www.molecularsystemsbiology.com since *EMBO* and Nature Publishing Group (NPG) launched the online, open-access journal in March 2005. **To request a free copy, please contact communications@embo.org.**

www.molecularsystemsbiology.com

Community spirit – Spanish style

Annual meeting of Spanish EMBO Members

Six years ago the Spanish contingent of the EMBO membership got together to organise a meeting of EMBO Members working in Spain. The aim was to give the scientists a chance to exchange ideas and discuss topics of particular importance to Spanish science. The meeting has since become an annual event supported by a modest financial contribution from EMBO. The latest gathering took place in Alicante on 21 October 2005, directly preceding the EMBO Sectoral Meeting on neurobiology.

The Alicante meeting was a very varied scientific event with talks from the different research areas represented among the Spanish

membership. This year, for the first time, EMBO Young Investigators participated and spoke at the meeting, widening the links within the Spanish EMBO network. As well as pure science, the meeting provided participants with an opportunity to learn more about current EMBO initiatives, debate the future of EMBO interactions with its Spanish membership and consider current developments in European science, such as the foundation of the European Research Council (ERC). Oscar Marin, EMBO Young Investigator and member of the ERC Scientific Council, provided participants with a welcome insight into the early development of the ERC.

The scientific value of these national membership meetings is clear but they also serve to promote a sense of community amongst EMBO scientists and strengthen interactions between EMBO and its members. The success of the Spanish meetings is reliant on the efforts of EMBO Members who organise and attend every year. EMBO would welcome similar initiatives in other countries. Members or young investigators interested in setting up a national meeting can contact embo@embo.org for further guidance.

www.embo.org/communities/members.html

Teaching ethical biotechnology

European course from BIOTETHED initiative

The EU-funded BIOTETHED consortium, co-ordinated by EMBO Member *Franco Celada*, is offering a new graduate course in biotechnology ethics. The interdisciplinary course will take place from 29 June to 6 July 2006 at the Masaryk University in Brno, Czech Republic and is aimed at PhD students or young researchers from life sciences or ethics fields. As such, the course will provide a novel environment for ethicists and scientists to get together and discuss key ethics questions.

The BIOTETHED course takes an interactive, case-based approach to the ethical issues emerging from today's biotechnology sector.

The curriculum covers ethical theory and practice, European biotechnology law, ethical factors in new research, risk and risk perception, as well as industrial practice and politics. The seven-day course also takes a look at the current situation in the new EU member states, where laws are often implemented without extensive ethical debate.

Interested candidates can apply for the course online. Accommodation for successful applicants is fully subsidised and travel grants are available.

www.biotethics.org

As a partner in the BIOTETHED project, EMBO organises cross-disciplinary sessions between ethicists and scientists at scientific meetings. Interested organisers should contact scisoc@embo.org for further details.

Application deadline:

20
May

BIOTETHED
Graduate course
in biotechnology
ethics



A EuroStemCell production directed by Cameron Duguid

Let the science tell the story

EuroStemCell public outreach film

The EuroStemCell consortium, co-ordinated by EMBO Member *Austin Smith*, has produced a short film that takes a novel look at the world of stem cell research. A result of close collaboration between filmmakers and scientists, the film uses innovative animation, extraordinary cell photography and documentary footage to capture the fascination and complexity of stem cell science.

Entitled *A Stem Cell Story*, the film provides a short introduction to the biology of stem cells and is aimed at lay audiences aged 14 and upward. The 15-minute production traces

a path from the properties of stem cells through to current and future clinical applications. Accompanying viewers on this fascinating journey are four leading European scientists – *Austin Smith*, *Yann Barrandon*, *Jennifer Nichols* and *Daniel Pipeleers*.

A multi-language version of *A Stem Cell Story* will be available on DVD from February 2006. For more information and to obtain a copy, visit:

www.eurostemcell.org/outreach/outreach_package.htm

Working together to build immunity

EMBO Members among Descartes laureates



The European Initiative on Primary Immunodeficiencies (EURO-PID), co-ordinated by EMBO Member *Alain Fischer*, is one of five research teams to win the 2005 Descartes Prize for Research. EURO-PID shares the annual award of one million Euro with four other research groups from the areas of climate change, social sciences, physics and astrophysics.

As the name suggests, the EURO-PID consortium targets primary immunodeficiencies or PIDs, a group of over 130 rare genetically determined diseases. PIDs leave sufferers –predominantly children– open to infection, lymph cell proliferation and autoimmune disorders, many of them life-threatening. Led by Alain Fischer of INSERM, France's national institute for health and medical research, EURO-

PID pools the resources of seven genetics teams in France, Italy, Sweden and the UK. This includes another INSERM research group run by EMBO Member, *Jean-Laurent Casanova*.

EURO-PID employs a combination of clinical immunology and basic scientific studies to investigate the molecular mechanisms responsible for PIDs.

After several years of collaboration, the research partners have produced a wealth of information on how cells differentiate and function in the immune system and how they regulate immune responses. The group has collectively described defects in 20 important defensive genes and developed a promising form of gene therapy for one type of severe combined immunodeficiency (SCID).

On receiving the Descartes Research Prize on behalf of the EURO-PID scientists, Alain Fischer stressed the need for further collaborative research in this area, "This award recognises a 20-year endeavour by hundreds of scientists and clinicians. There are five to six thousand rare diseases and 20 to 30 million patients in Europe. Much remains to be done in the way of accurate diagnostics and better hopes for therapies. This progress can only be fostered by sharing data from patients across Europe and by making biological specimens widely available."

Looking ahead, the EURO-PID consortium is hopeful. The researchers believe that the project's findings will continue to benefit patients through new diagnostic, prognostic and therapeutic tools. The group also aims to tackle at least three more PIDs in the coming years and believes that their discoveries will form the foundation for strategies to alleviate and cure many more common diseases – despite the complexity of their genetic origins.

EMBO Member, *Ana Carrera* of the Spanish National Biotechnology Centre (CNB) in Madrid, also featured in the Descartes award line-up. Her research group is a partner in the PITCID consortium, singled out as a finalist in the 2005 competition. The PITCID team receives 30,000 Euro for their work on a therapeutic approach for chronic inflammatory disease based on the targeting and deactivation of a family of enzymes called phosphoinositide 3-kinases (PI3Ks).

<http://europa.eu.int/comm/research/descartes>

Biology in words and pictures

EMBO communication winner reaches Descartes final

Fran Balkwill, the EMBO nominee for the 2005 Descartes Communication Prize, has been honoured as a runner-up in the latest edition of the highly competitive award. Director of the Cancer Research UK Translational Oncology Centre in London, Balkwill won the EMBO Award for Communication in 2004. The Descartes jury was equally impressed, selecting her as one of five finalists to win an award of 5,000 Euro.

Fran Balkwill's prize-winning communication efforts explain some of today's most complex scientific issues to young children. The

professor of cancer biology has authored 13 acclaimed children's books often covering difficult subjects such as stem cells, HIV/AIDS and cancer. The imaginatively illustrated books have proved popular with children the world over and have been translated into more than a dozen languages including German, Italian, Finnish, Japanese, Korean, Zulu and Afrikaans.

Balkwill's latest books are aimed at educating children in sub-Saharan Africa at risk of contracting HIV. With the help of charitable funding, the books have been distributed free throughout southern Africa. Most recently

Balkwill has turned her skills to developing a new science centre in London's East End. Due to open in 2006, the Centre of the Cell will be the first science education centre to be housed in a medical school with working research laboratories.

<http://europa.eu.int/comm/research/descartes>

Of mice and men

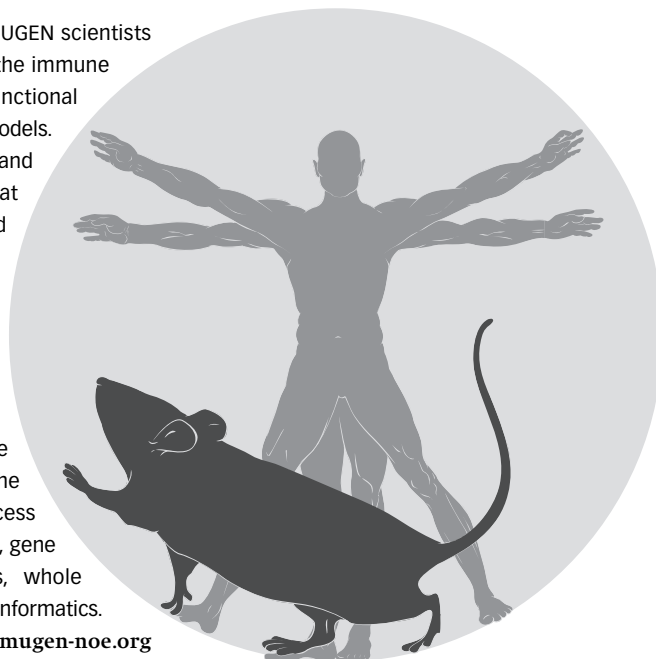
MUGEN mouse models target human disease

A group of EMBO Members is currently collaborating on a pan-European research endeavour that pools functional genomics technology, in particular large-scale mouse modelling, to investigate human immunological disease. Sharing a virtual bench with other immunologists from all over Europe, the ten EMBO Members are part of the MUGEN Network of Excellence, launched by the European Commission in early 2005.

Funded by the 6th Framework Programme, MUGEN links 24 leading immunology research groups across Europe. The five-year project is co-ordinated by EMBO Member, *George Kollias* of the Alexander Fleming Biomedical Sciences Research Center in Athens, Greece. Elaborating on the network's aims, Kollias commented, "Post-genomic biology offers an unprecedented opportunity to study the complexity of the immune system and understand the molecular and cellular basis of human disease. The research teams integrated in MUGEN have excellent track records in the network's various research activities. Through their joint efforts, MUGEN will deliver on new knowledge and most crucially, on its application for diagnostic and therapeutic purposes."

The core activity of the MUGEN scientists is research into diseases of the immune system using integrated functional genomics in mutant mouse models. The mutants are conditional and inducible, which means that genes can be switched on and off in a way that precisely pinpoints the genetic factors implicated in a disease. Random mutagenesis of the whole genome also offers a unique technological platform to uncover pathogenic gene function during disease. The MUGEN network also has access to conditional gene targeting, gene expression and proteomics, whole genome mutagenesis and bioinformatics.

www.mugen-noe.org



EMBO Members in MUGEN Network

- Anton Berns
- Paola Castagnoli
- Gunter Hammerling
- Dimitris Kioussis
- George Kollias (Co-ordinator)
- Antonio Lanzavecchia
- Alberto Mantovani
- Bernard Malissen
- Klaus Pfeffer
- Glauco Tocchini-Valentini

Putting the pieces together

Inauguration of integrative genomics centre



Lausanne Federal Institute of Technology, the CIG focuses on both research and training with the aim of becoming an international competence centre in functional genomics. Bringing together groups at the forefront of genomics research, the centre pools a variety of techniques and technologies to address the fundamental principles and applications of genes and genomes. The CIG also cites improved human and animal health care as one of its long-term objectives. In practice, this will mean

actively creating links between basic research carried out at CIG and applications used in hospitals and industry.

The CIG's inaugural celebrations took place on 27–28 October 2005 and featured a scientific symposium entitled "Genomics: A new road for science and society". Among the speakers at this landmark event were EMBO Members, *Denis Duboule*, *Susan Gasser* and *Ernst Hafen*.

www.unil.ch/cig

October 2005 saw the inauguration of the Center for Integrative Genomics (CIG) in Lausanne, Switzerland. Directed in its founding years by EMBO Member, *Walter Wahli* and now run by *Nouria Hernandez*, the centre takes an integrated approach to investigating how organisms develop, reproduce and survive under a range of environmental, physiological and genetic conditions.

Set up by the University of Lausanne and supported by the University of Geneva and the



Tagging genes in *C. elegans*

NemaGENETAG consortium

C. elegans may be small but it has a lot of potential. With over 19,000 genes, the tiny worm provides a powerful platform for the study of biological mechanisms and human disease. The NemaGENETAG consortium, coordinated by EMBO Young Investigator *Nektarios Tavernarakis*, is using a novel approach to produce a collection of *C. elegans* strains that will be freely available to the scientific community.

The EU-funded NemaGENETAG project aims to characterise the entire complement of *C. elegans* genes through the insertion of transposable DNA segments known as transposons. The end result will be a fully stocked and carefully catalogued library of *C. elegans* strains carrying transposon-tagged genes.

The six laboratories collaborating in the consortium have developed and optimised tools based on the *Drosophila* transposon *Mos1* to generate point mutations, deletions and insertions in the *C. elegans* genome. Novel mutagenesis and transgenesis tools are also being produced based on transposable elements such as the *Minos* transposon.

Thanks to this optimised technology, the consortium is now generating *C. elegans* strains carrying transposon insertions at a rate of more than 2000 per month. The group has already characterised more than 2000 individual transposon insertions at the molecular level and ultimately aspires to reach a genome-wide level of transposon tagging.

The NemaGENETAG library aims to complement existing resources such as RNAi libraries and accelerate understanding of gene function. Since approximately 50% of human genes have a *C. elegans* homologue and more than 65% of human disease genes are represented in its genome, the NemaGENETAG library will provide an ideal source of ready-made models and reagents to investigate human pathologies.

All strains generated by the NemaGENETAG consortium are available free of charge to the scientific community.

<http://elegans.imbb.forth.gr/nemagenetag>

A good read – publications from the EMBO community

■ research

RNA transport and local control of translation

Stefan Kindler, Huidong Wang, Dietmar Richter, Henri Tiedge
Annual Review of Cell and Developmental Biology 21: 223–245
(Nov 2005)

■ books

DNA Repair and Mutagenesis

2nd Edition (ASM Press, ed. 2005)

By Errol C. Friedberg, Graham C. Walker,
Wolfram Siede, Richard D. Wood,
Roger A. Schultz, Tom Ellenberger

ASM press says: "Featuring more than 10,000 references and a text lavishly complemented by over 700 illustrations, *DNA Repair and Mutagenesis*, 2nd Edition, is a timely update to the original edition published in 1995. The addition of three new authors, including an expert in the field of structural biology,

ensures a comprehensive review of the most current research in diverse subject areas.

An ideal textbook for advanced undergraduate and graduate students, the book is also an essential resource for all scientists researching cellular responses to DNA damage."

Landmark Papers in Yeast Biology

(Cold Spring Harbor Laboratory Press, ed. 2006)

Edited by
Patrick Linder, David Shore, Michael Hall

Featuring contributions by EMBO Members:
Thomas Boehm, John Diffley, Michael Hall,
John Kilmartin, Nancy Kleckner, Kim Nasmyth,
Walter Neupert, Alain Nicolas, Paul Nurse,

Stephen Oliver, Hugh Pelham,
Howard Riezman, Gottfried Schatz,
Randy Schekman, Manfred Schweiger,
Giora Simchen, Bruce Stillman,
Pierre Thuriaux, Alexander Varshavsky,
Dieter Wolf

CSHLP says: "*Landmark Papers in Yeast Biology* consists of essays by prominent scientists on the context and significance of 71 carefully selected research papers.

The papers include early, hard-to-find classics as well as more recent advances in areas such as signal transduction, membrane trafficking, protein turnover, and genomics. This collection has unique value for all scholars of yeast and could provide the foundation for a literature-based course on molecular cell biology."

Structural and Evolutionary Genomics, 37
Natural Selection in Genome Evolution
(Elsevier, ed. 2005)

by Giorgio Bernardi

Elsevier says: "Structural genomics and evolutionary genomics... are approached in this book using as a guideline the investigations carried out in the author's laboratory. Relevant literature is critically reviewed and some general conclusions are presented. The author and his collaborators have studied

a vast number of genomes, ranging from prokaryotes to human, using different approaches... As the subtitle indicates the book discusses the fundamental importance of natural selection in shaping genomes... A "neo-selectionist" model is proposed for genome evolution."

Event updates from the EMBO community

■ conferences : congresses : meetings

26th Blankenese Conference on Energy Metabolism: From Feeding Behaviour to Metabolic Diseases

20–24 May 2006, Hamburg, DE
Dietmar Richter
http://web.zmnh.uni-hamburg.de/blankenese_conferences

21st International Winter Meeting on Growth and Death in the Nervous System

22–26 March, St. Moritz, CH
Adriano Aguzzi
www.ssn.unizh.ch

15th Congress of the Federation of European Societies of Plant Biology

17–21 July, Lyon, FR
Chris Bowler, Michel Caboche
www.fespb2006.org

31st FEBS Congress: Molecules in Health and Disease

24–29 June, Istanbul, TR
Julio Celis
www.febs2006.org

14th International Conference of the International Society of Differentiation

7–11 October, Innsbruck, AT
Nadia Rosenthal
www.isd2006.at

Awards of excellence

■ EMBO Members

Anders Jahre Award 2005, NO

Sirpa Jalkanen for her groundbreaking research into inflammatory processes

18th Bristol-Myers Squibb

»Freedom to Discover« Award for Distinguished Achievement in Neuroscience Research, USA

Christine Petit for her pioneering discovery of the molecular basis of hearing and the genetic causes of deafness

DART/New York University Award 2006, USA

Jean-Pierre Changeux for outstanding contributions to molecular biology and biotechnology

Gottfried Wilhelm Leibniz Prize 2006, DE

Marino Zerial for his contribution to the understanding of basic cellular processes during endocytosis and his insights into disease

Louisa Gross Horwitz Prize 2005, USA

Ada Yonath for outstanding basic research in the fields of biology or biochemistry

Max Delbrück Medal 2005, DE

Tom Rapoport for his seminal role in the elucidation of the mechanisms for protein transport in cells

Charles-Léopold Mayer Prize 2005, FR

Jean Dénarié for his significant contribution to the development of model systems for the study of plant symbiosis

Jean Valade Prize 2005, FR

Johan Auwerx for his work on the nuclear receptor LRH-1 and its function in development, metabolism and cell proliferation

Honorary Doctorate, Swiss Federal Institute of Technology, Zurich, CH

August Böck for his inspiring work on the incorporation of the elements selenium, nickel and iron into microbial proteins

Foreign Honorary Member, Genetics Society of Japan, JP

Giorgio Bernardi

Schellenberg Research Prize 2005, CH

Silvia Arber for her contributions to the understanding of nervous system development in the embryo

■ EMBO Young Investigators

Bodossaki Foundation Scientific Prize 2005, GR

Nektarios Tavernarakis for outstanding achievements in the field of neuroscience

Marie Curie Excellence Award 2005, EU

Maria Pia Cosma for her research into molecular and cellular genetics