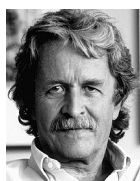


MESSAGE FROM EMBO EXECUTIVE DIRECTOR

Molecular biology in the modern era



Intense discussions on the future direction of molecular biology were already taking place in what could be considered the "classical era" of molecular biology – between the years 1950 and 1968.

"...this new molecular biology...has to explore the high-level logical computations, the programmes, the algorithm of development in molecular terms. Because after all... we are asking the question that people raised in the 1870's," contributed *Sydney Brenner* in 1960. "...and one would like to be able...to move between the molecular hardware and the logical software of how it is all organised without feeling they are different sciences."

Molecular biology has indeed moved in the direction envisioned by Sydney and his colleagues. Its concepts have pervaded practically all areas of biology including the applied disciplines of medicine, agriculture and biotechnology. In this way, molecular biology has stayed young and there is no sign that it will slow down with regard to gaining exciting new insights into mechanisms and processes of living systems.

At EMBO we observe these wonderful developments with delight. Alongside these developments we examine our operations: does our membership profile still reflect present day molecular biology? Do our programmes support the right young researchers? Do we, according to our mission, disseminate the right ideas, knowledge and techniques? Do we reach all the communities of scientists we aim to reach in all member states?

EMBO Council and EMBO management had intense discussions on these topics during recent meetings, and accordingly, we are reassessing our policies and the spectrum of activities. While a number of issues are still under discussion, we are moving ahead with others.

One of the ways molecular biologists contribute to solving problems in our societies is

by working at the interface of clinical research and basic molecular biology. Thus, in 2008 EMBO initiated a Fellowship Programme for molecular medicine. Moreover, thanks to the dedicated work of *Les Grivell*, *EMBO Molecular Medicine*, a new peer-reviewed journal devoted to this partnership (see page 9), calls for article submission prior to its launch in early 2009.

In 2009, EMBO is re-igniting an early tradition of providing a forum for scientific exchange by introducing *The EMBO Meeting* (see page 3). This annual conference intends to bring together researchers from Europe and all over the world and will address, in particular, scientists in early years of their research careers, such as PhD students and postdocs.

The elegant EMBL Advanced Training Centre (ATC) (see page 4), rising before our eyes in Heidelberg, will open its doors in late 2009. Beginning in 2010, EMBO and EMBL will co-organise a new series of symposia that will complement EMBO Courses & Workshops Programme, managed by *Maria Barbosa*. Maria, who joined us towards the end of last year, is playing a key role as part of the working group for EMBO/EMBL Symposia.

To take on these new activities, in addition to our ongoing programmes, would not have been possible without a dedicated and competent staff in Heidelberg to ensure the successful execution of all that EMBO delivers to our communities. Over the past year, some new people have joined us and others have changed roles and in some cases taken on more responsibilities. I would like to take this opportunity to highlight some of those involved.

Gerlind Wallon and *Jan Taplick* were promoted to Deputy Executive Directors of EMBO, effective January 2008. Gerlind and Jan work closely with me and share a number of key duties. *Suzanne Beveridge* joined us last September as EMBO Chief Communication Officer, and heads the team that ensures, not only effective execution of *The EMBO*

HIGHLIGHTS IN THIS ISSUE

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 by *Bertrand Jordan* 11



Meeting, but of all communications – whether print- or web-based – as well as public relations activities. Of essential help in all of our reorganisation is *Volker Wiersdorff*, who was promoted to head EMBO Information Support & Resources group. Database harmonisation by new software and hardware has allowed us to make a number of processes more efficient and thus to create more working capacity. Finally, to have a smooth start for *EMBO Molecular Medicine*, *Sandra Caldeira* will take on the internal editor role. Sandra previously was an editor for *EMBO reports*.

In this way, with the support of EMBO Council, EMBC and our staff, EMBO is well positioned to play its unique role in the modern era of molecular biology – a discipline as strong and relevant as ever.
Hermann Bujard

EMBC Delegates meet in Heidelberg

Results of November 2007 EMBC Meeting



photo by Marietta Schupp (EMBL-PhotoLab)

Peter Weisbeek, EMBC President

In two sessions per year, the European Molecular Biology Conference (EMBC) meets to review funding of EMBO programmes and activities. Contributions from the 27 EMBC Member States provide the majority of EMBO

finances. More than 30 delegates and advisers from the member states met in Heidelberg on 19 November 2007 and were joined by EMBO management and representatives from EMBO Council.

Peter Weisbeek from the Department of Biology at Utrecht University, The Netherlands, was elected as EMBC President, effective January 2008. *Krešimir Pavelić* (Croatia) was re-elected Vice-President for a fourth year and *Claudio Sunkel* (Portugal) was elected Vice-President for the first time. *Isabella Beretta* from Switzerland was re-appointed EMBC Secretary General. Other elections included *Maria José Almeida* (Portugal) and *Paula Heppner* (Germany) as Chair and Vice-Chair respectively of the Financial Advisory Committee and the Audit Committee.

Outgoing president, *Marja Makarov*, closed the meeting summarising her four-year term in office. She highlighted the three new member states during the period – Estonia, Luxembourg and Slovak Republic – and the introduction

of EMBO Installation Grants that are funded by participating EMBC Member States (see page 4). She congratulated the member states on the exemplary collaboration between the scientific and political delegates representing their countries.

■ www.embo.org/embc

EMBC Officers 2008

■ President

Peter Weisbeek (NL)

■ Vice Presidents

Krešimir Pavelić (HR)

Claudio Sunkel (PT)

■ Secretary General

Isabella Beretta (CH)

■ Chair of Financial Advisory Group

Maria José Almeida (PT)

■ Vice-Chair of Financial Advisory Group

Paula Heppner (DE)

■ Chair of Strategic Working Party

Peter Weisbeek (NL)

Young Investigators reach out to Turkish scientists

EMBO Young Scientists Forum

More than 400 young Turkish scientists got together at Istanbul's Boğaziçi University campus for the first-ever EMBO Young Scientists Forum on 20–22 February.

Two recipients of EMBO Installation Grants, *Nesrin Özören* from Boğaziçi University and *Devrim Gözüaçık* from Sabancı University, organized the event that attracted Masters and PhD students, post docs and group leaders from all major institutes in Turkey.

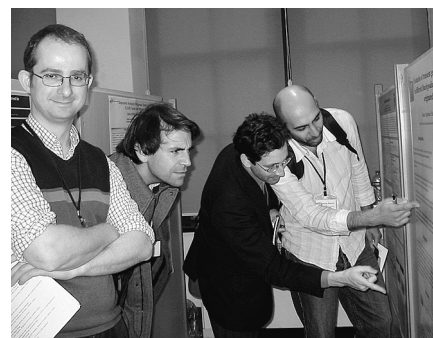
Members of EMBO Young Investigator Programme first suggested the idea to reach out to PhD students in the peripheral EMBC Member States in order to highlight the attractiveness of a life science career and to showcase European science. The local organizers developed this idea further to include scientists from all levels, allowing students to present posters and interact with the speakers, and local group leaders to present their research and network with EMBO Young Investigators. Young investigators and young Turkish group leaders gave a total of fifteen talks. A poster

session with a competition for a poster prize and meet the speaker sessions completed the meeting, allowing participant interaction.

Formerly the American Robert College founded in 1863, Boğaziçi University overlooks the Bosphorous in Istanbul and is one of the top universities in Turkey with 10,500 students and nearly 1,000 faculty. All major lectures in the life sciences are given in English, making Turkish scientists attractive on the international market.

Turkish media covered the event extensively with interviews with *Karim Labib* (CR UK, Manchester, UK) and *Anne Bertolotti* (MRC LMB, Cambridge, UK) appearing in the press. EMBO Executive Director *Hermann Bujard* was interviewed for TV news coverage.

The dynamic community of Turkish scientists are benefiting from the increased investment into science by the Turkish government. Turkey plans to spend two percent of GDP on R&D in the near future to become an attractive scientific partner. Up until now, there has



been no scheme to lure post-doctoral or young independent scientists back to Turkey after completion of their PhDs, mainly in the US. But this is changing rapidly with the government's increasing investment in science.

Both EMBO and EMBL are supporting the Turkish endeavour to strengthen their local science base. *Iain Mattaj*, EMBL Director General, recently visited institutes in Istanbul and Izmir, while EMBO Young Investigators will return to Boğaziçi University for their 2009 annual meeting.

Erratum:

The list of newly elected EMBO Members in 2007 published on page 2 of *EMBOencounters* Issue 9 listed the incorrect affiliation for **Pier Paolo Pandolfi**. Professor Pandolfi is at the **Beth Israel Deaconess Medical Center in Boston, US**.

EMBO Council goes to Lucerne, Luzern, Lucerna

Extraordinary meeting discusses strategic matters

Reflections of snow-covered mountains in Lake Lucerne formed the backdrop for strategic discussion amongst members of EMBO Council when they met from 8–9 April. This extraordinary meeting was held in advance of the ordinary meeting next October so that council members could consider policy matters to ensure EMBO continues to meet the needs of its community of scientists in today's research environment.

Hosted by EMBO Council Chair *Tim Hunt*, the meeting also was attended by EMBO Executive Director *Hermann Bujard*, EMBO Secretary General *Christiane Nüsslein-Volhard*, former EMBO Membership Committee Chair *Maria Leptin* and EMBL Director General *Iain Mattaj*. Managers from EMBO Heidelberg offices participated where updates related to programmes and activities were required.

The next ordinary meeting of EMBO Council will be in Heidelberg 2–3 October.



View on the Reuss River, outflow from Lake Lucerne (Vierwaldstätter See)

photo by Valeria Kaplan

The EMBO Council (as of January 2008)

■ Anton Berns (Vice-Chair)	■ Ari Helenius	■ Ferenc Nagy
■ Maria Blasco	■ Tim Hunt (Chair)	■ Daniela Rhodes
■ Margaret Buckingham	■ Roberto di Lauro	■ Benny Shilo
■ Gunnar von Heijne	■ Daniel Louvard	■ David Shore
■ Carl-Henrik Heldin	■ Marjori Matzke	■ Kai Simons

■ www.embo.org/about_embo/council_committees.html

Science for scientists by scientists

Inaugural event – The EMBO Meeting 2009

The most exciting phrase to hear in science, the one that heralds new discoveries, is not 'Eureka!' (I found it!) but 'That's funny...'

ISAAC ASIMOV

Some of our readers may recall, or perhaps have heard about, the annual EMBO Symposia organised from the mid-seventies until the early nineties. The first three were held close to Heidelberg at Hirschhorn while later on symposia were in Heidelberg.

EMBO is re-igniting this tradition of providing a general forum for scientific exchange. The fusion of ELSO into EMBO later this year offers the opportunity to hold an annual life sciences conference, just as ELSO has done since 2001. Planning is well and truly underway for the inaugural event – *The EMBO Meeting 2009* – from 29 August to 1 September in Amsterdam.

Bringing together researchers from Europe and all over the world, EMBO plans to attract presentations of the latest results in life science research. Scientists still early in their

career will meet the major players across numerous life science areas as well as learn of the many EMBO offerings that empower them to advance European science.

EMBO Members, *Hans Clevers* and *Steve West*, are co-chairs of the event. They are putting together a stimulating scientific programme for the conference. Participants can expect to hear from leaders in their fields in the keynote addresses and plenary sessions. Concurrent sessions will offer options to hear the latest research on a number of topics. Special lecturers will include the 2009 EMBO Gold Medal winner. More guest lectures are planned from scientists working outside of the life sciences as well as in the field of science policy.

Science & Society and Women in Science sessions plus career activities and non-scientific skill training are also on the agenda. Student poster presentations will continue as a key activity amongst the industry exhibits, just as they have been at former ELSO meetings. And EMBO editors will dispel any mystery associated with scientific publishing.

Keep an eye on the EMBO website over the coming months for the exciting launch of *The EMBO Meeting 2009*. And perhaps you might hear the phrase 'that's funny...' uttered more than once in Amsterdam next year as new research ideas are seeded.

■ the.embo.meeting@embo.org



Advanced training in Heidelberg

EMBO | EMBL Symposia in the ATC

Scientific education is a key commitment of both EMBO and EMBL. Almost daily, it seems, the hum of construction brings more of the helix-inspired EMBL Advanced Training Centre (ATC) into existence to remind Heidelberg staff from both organisations and visitors of opportunities ahead to integrate training activities. The 450-seat auditorium and space to exhibit 300 posters plus seminar rooms and teaching labs will offer a premium conference facility in Europe.

EMBO and EMBL are collaborating to jointly fund an annual series of symposia, to be known as EMBO | EMBL Symposia in the ATC. The first series of three symposia are planned to commence in 2010 but up to six symposia

could take place annually, each over two to four days.

Both organisations have identified a committee of 10 members (see table) to identify forward-looking symposia topics in a top-down manner in conjunction with *Hermann Bujard* and *Iain Mattaj* as co-chairs, thus ensuring subject areas are complementary to EMBO Courses & Workshops Programme. The committee will meet for the first time in September 2008 and welcomes suggestions for symposia topics.



EMBO Committee members

- **Hermann Bujard** *Co-chair*
(EMBO Executive Director)
- **Pico Caroni** (CH)
- **Ivan Dikic** (DE)
- **Staffan Normark** (SE)
- **Andrew Wilkie** (UK)

EMBL Committee members

- **Anne Ephrussi & Matthias Hentze**
(EMBL Heidelberg)
- **Iain Mattaj** *Co-chair*
(EMBL Director General)
- **Christoph Müller** (EMBL Heidelberg)
- **Ewan Birney** (EBI Hinxton)
- **Darren Gilmour** (EMBL Heidelberg)

Strengthening science across Europe

EMBO Installation Grants help nine scientists establish labs

Arzu Çelik planned to return to Turkey after completing her PhD in Germany and post-doc in the United States. She felt she could contribute to the growing research scene. But after 11 years away, she realised that gaining adequate funding for her lab that focuses on cell-type differentiation during eye development and connecting with other Turkish scientists would be key to a successful transition.

Arzu was one of nine talented life scientists awarded EMBO Installation Grants at the end of 2007, assisting them to relocate and set up their research groups in Croatia, the Czech Republic, Hungary, Poland, Portugal and Turkey. These nine scientists are the second group of awardees since the scheme was introduced in 2006.

EMBO Installation Grants are awarded annually and aim to strengthen science in participating EMBO Member States. The member states hosting the grantees finance the grants entirely. Current participants include Croatia, the Czech Republic, Estonia, Hungary, Poland, Portugal and Turkey.

Each scientist receives 50,000 euro annually for three to five years to help them establish their groups and themselves in the European scientific community. Grantees are integrated into the prestigious EMBO Young Investigator network, providing networking opportunities with some of Europe's best young group leaders and a range of career development programmes.

Arzu Çelik says that the flexible spending conditions of the EMBO Installation Grant complement other local grants, allowing her to structure her lab budget to get established quickly and focus on the lab's research.

"The grant has definitely made it much easier for me to connect to other scientists in Turkey," said Arzu, "and has led to the establishment of a regular Istanbul-wide meeting series where young investigators and their groups meet every two months to discuss their research."

By bringing high levels of scientific talent into the participating countries, EMBO hopes to improve the competitiveness of these coun-

tries in European science. Two of the nine grantees from 2007 are establishing groups in the Czech Republic, two in Hungary, two in Turkey, one in Croatia, one in Poland and one in Portugal. Four scientists moved from positions in the USA, two moved from the UK, two from Switzerland and one moved from Sweden.

■ www.embo.org/sdig/index.html

EMBO Installation Grantees 2007

- **Vítězslav Bryja** (CZ)
- **Arzu Çelik** (TR)
- **Agnieszka Dobrzyń** (PL)
- **Csaba Pál** (HU)
- **Attila Reményi** (HU)
- **Štěpánka Vaňáčková** (CZ)
- **Henrique Veiga-Fernandes** (PT)
- **İbrahim Yaman** (TR)
- **Bojan Žagrović** (HR)

Welcome new EMBO Fellows

Record number of applications again in 2007

Demand for EMBO Fellowships was on the rise again in 2007. Of the 1288 applications received for long-term fellowships, 212 candidates were chosen. The first-round of 2008 applications

have recently been awarded while the next application deadline is 15 August 2008.

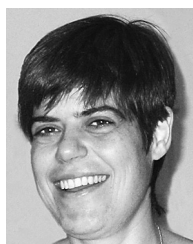
■ www.embo.org/fellowships/index.html

Bi-annual application deadlines

15 February	15 August
EMBO Fellowships	

Recognizing achievements of women scientists

FEBS/EMBO Women in Science Award



Beginning this year, EMBO joins with FEBS to reward the success of women scientists in life sciences research over the previous five years. The first-ever FEBS/EMBO Women in Science

Award will be presented to **Naama Barkai** on 2 July 2008 at the 33rd FEBS Congress and 11th IUBMB Conference in Athens, Greece.

Barkai of the Weizmann Institute of Science in Rehovot, Israel receives the award for her outstanding contributions to the field of systems biology and the mathematical modelling of biological systems. Her deep understanding of biology and physics allows her to combine experiments and theory to develop novel solutions to fundamental biological problems such as chemotaxis, embryonic development and the organisation of the cellular transcription programmes.

Professor *Uri Alon*, a colleague of Barkai for the past eight years at the Weizmann Institute of Science, commented: "Naama's work is consistently inspiring. She has, in my opinion, identified some of the most fundamental problems in systems biology and proposed elegant and powerful answers."

The selection committee credits Barkai's originality and creative research as not only revolutionising the field of systems biology but also significantly changing the way scientists think about complex biological processes.

An associate professor at the departments of Molecular Genetics and Physics of Complex

Systems at the Weizmann Institute of Science in Rehovot, Israel, Naama Barkai utilizes mathematical modelling to unravel the principles that govern the design and function of biological networks. She was visiting professor at Harvard University (2005–2006) and a Robert H. Dicke Fellow at Princeton University where she worked with *Stanislas Leibler* on the theoretical analysis of biochemical networks. She received her PhD in Physics at the Hebrew University (1995) for research on statistical mechanisms of learning.

Naama Barkai will deliver a special plenary lecture at the congress in Athens following

presentation of the 2008 FEBS/EMBO Women in Science Award of 10,000 euro.

"I am honoured that FEBS and EMBO have recognized my work," she said. "Women are under-represented in academia and this award helps to raise awareness of the opportunities for female scientists to further their research careers."

In 2007, Naama Barkai was elected an EMBO Member and she was an EMBO Young Investigator (2001–2004). She has received several prestigious awards including the Helen and Martin Kimmel Award for Innovative Investigation (2007), the Teva Prize for Research in Systems Biology (2005), the Morris L. Levinson Biology Prize from the Weizmann Institute of Science (2004) and the Michael Bruno Memorial Award (2004).

■ www.embo.org/gender/award.html



Selection committee for

FEBS/EMBO Women in Science Award

- Margarida Duarte Amaral (PT)
- Andrea Barta (AT)
- Daniela Corda (IT)
- Chris Dobson FRS (GB)
- Eric Karsenti (DE)
- Robero Sitia (IT)
- Claudio E. Sunkel (PT)
- Saskia M. van der Vies (NL)

Nominations for the 2009 FEBS/EMBO Women in Science Award close on 1 September 2008.

Young investigators gain research boost

ERC Starting Grants

The European Research Council (ERC) will support about 300 independent investigators for five years as a result of its first competition for Starting Grants. More than a third will likely come from the life sciences and more than 20% of those are already part of the network of EMBO Young Investigators.

Designed to boost the careers of researchers at the time they are establishing themselves as independent research leaders, ERC Starting Grants will greatly enhance the work of young investigators.

Congratulations to the following EMBO Young Investigators and recipients of

EMBO Installation Grants awarded ERC Starting Grants:

- Reuven Agami (NL)
- Yohanns Bellaïche (FR)
- Sigal Ben-Yehuda (IL)
- Vincenzo Costanzo (UK)
- Jason Chin (UK)
- Johanna Ivaska (FI)
- René Ketting (NL)
- David Leys (UK)
- András Málnási-Csizmadia (HU)
- Attila Mócsai (HU)
- Giles Oldroyd (UK)

- Csaba Pál (HU)
- Yitzhak Pilpel (IL)
- Maria Rescigno (IT)
- Arp Schnittger (FR)
- Dirk Schübeler (CH)
- Eran Segal (IL)
- Joan Seoane (ES)
- Katja Sträßer (DE)
- Henrique Veiga Fernandes (PT)
- Olivier Voinnet (FR)

EMBO EVENTS 2008

PRACTICAL COURSES (EUROPE)

- Multi-dimensional NMR in structural biology
IT–Il Ciocco, 3–8 August
- Cell biology of host–pathogens interactions
FR–Paris, 18–29 August
- Electron microscopy and stereology in cell biology
CZ–Česke Budejovice, 20–29 August
- Cryo-electron microscopy and 3-D image analysis
DE–Heidelberg, 24–31 August
- Protein expression, purification and crystallisation (PEPC-6)
DE–Hamburg, 1–9 September
- Anatomy and embryology of the mouse
HR–Zagreb, 6–14 September
- The application of transient kinetics methods to biological macromolecules
UK–Canterbury, 7–13 September
- Ubiquitin and SUMO
HR–Split, 12–19 September
- X-ray crystal structure determination of macromolecules
FR–Saint Aubin, 14–20 September
- Computational aspects of the protein target selection, protein production management and structure analysis pipeline
UK–Hinnton, 22–26 September

- Differential proteomics – from 2-D gel electrophoresis to mass spectrometry
DE–Heidelberg, 6–10 October

- Docking predictions of protein–protein interactions
ES–Barcelona, 14–17 October

- Solution scattering from biological macromolecules
DE–Hamburg, 19–26 October

WORKSHOPS (EUROPE)

- EMBO Members Workshop: Frontiers of Molecular Biology
FI–Tampere, 5–8 September
- Cytotoxicity, cell death and the immune system
ES–Zaragoza, 17–20 September
- Polo-like kinases: from the fly to the clinic 20 years onwards
PT–Porto, 24–27 September
- Chromosome segregation: centromeres and kinetochores
FR–Arcachon, 27 September–2 October
- Evolutionary and environmental genomics of yeasts
DE–Heidelberg, 1–5 October
- Can epigenetics influence reprogramming and metastatic progression?
DE–Bad Staffelstein, 6–9 October
- The NF-kappaB network in development and disease
IT–Capri, 18–21 October

CONFERENCE SERIES (EUROPE)

- Centrosomes and spindle pole bodies
DE–Heidelberg, 12–16 September
- Telomeres and the DNA damage response
CH–Villars-sur-Ollon, 15–19 September
- The molecular and cellular mechanisms regulating skeletal muscle development and regeneration
ES–Sant Feliu de Guixols, 24–29 September
- From functional genomics to systems biology
DE–Heidelberg, 15–18 November
- Protein structure prediction (CASP8)
IT–Cagliari, 3–7 December

CONFERENCE SERIES (EUROPE) *second in a series*

- At the interface of cell biology and cellular microbiology
CH–Villars sur Ollon, 20–25 September
- Molecular and cellular basis of regeneration and tissue repair
ES–Mallorca, 5–10 October
- Control, co-ordination and regulation of protein targeting and translocation
FR–Sainte-Maxime, 25–28 October

EMBO WORLD LECTURE COURSES

- Recent developments in macromolecular crystallography
IN–Pune, 9–14 November

EMBO WORLD WORKSHOPS

- Parental genomic imprinting
SG–Singapore, 21–24 September

EMBO WORLD PRACTICAL COURSES

- Computational biology: from genomes to cells and systems
SG–Singapore, 10–17 August
- Structure determination of biological macromolecules by solution NMR
CN–Beijing, 8–15 September
- Genetics of laboratory rodents
UY–Montevideo, 24 November–6 December

EMBO-ESF SYMPOSIA

- Bacterial Networks (BACNET08)
ES–Sant Feliu de Guixols, 13–18 September
- Protein design and evolution for biocatalysis
ES–Sant Feliu de Guixols, 25–30 October

For more information, please go to:

■ www.embo.org/about_embo/calendar.php

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

1

February

1

August

EMBO Courses & Workshops

OTHER EMBO EVENTS

MEMBERS

- EMBO Members Workshop – Frontiers of Molecular Biology
FI–Tampere, 5–8 September

YOUNG INVESTIGATORS

- Young Investigator PhD Course
DE–Heidelberg, 21–27 September

FELLOWS

- EMBO Fellows Meeting US
US–Boston, 7–9 November

LABORATORY MANAGEMENT COURSES

- EMBO Leadership Workshop for Senior Scientists
DE–Leimen (near Heidelberg), 8–10 July
- Time and self-management – EMBO Advanced leadership skills training
DE–Leimen (near Heidelberg), 16–18 July
- EMBO Laboratory Management Course (open to all independent scientists)
DE–Leimen (near Heidelberg), 16–19 September
- Young Investigator PhD Course
DE–Leimen (near Heidelberg), 21–28 September
- EMBO Laboratory Management Course (for postdocs)
DE–Leimen (near Heidelberg), 7–9 October
- EMBO Laboratory Management Course (for postdocs)
DE–Leimen (near Heidelberg), 22–24 October
- EMBO Laboratory Management Course (open to all independent scientists)
DE–Leimen (near Heidelberg), 3–6 November
- *Managing lab conflicts* – EMBO Advanced leadership skills training
DE–Leimen (near Heidelberg), 17–19 November

SCIENCE & SOCIETY

- 9th EMBL/EMBO Science & Society Conference – Systems and Synthetic Biology: Scientific and Social Implications
DE–Heidelberg, 7–8 November

EMBL **EMBO**

9th EMBL/EMBO joint conference on Science and Society

Systems and Synthetic Biology

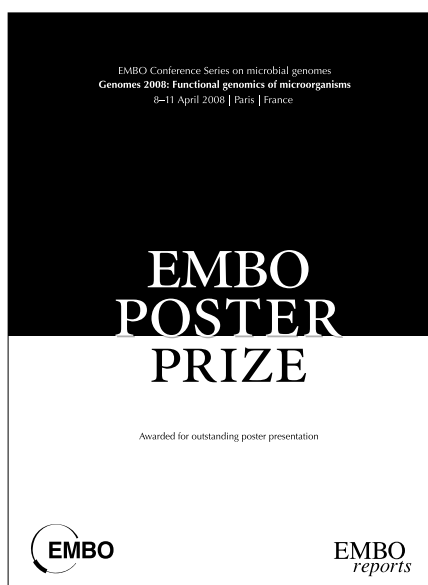
Scientific and Social Implications

EMBL Heidelberg, Germany, 7–8 Nov 2008
EMBL is the public – European No. 406 (www.embl.org)

Confirmed participants
Day One
Session I: Systems approaches: from descriptive to predictive biology
Session II: Synthetic biology: deconstructing and reconstructing life
Day Two
Session III: On case and the danger of abuses of new knowledge and technologies
Session IV: Paradigm shifts vs fashion shifts in science

www.embl.org

Poster prizes – NEW in 2008!



EMBO Courses & Workshops Programme and *EMBO reports* introduce EMBO poster prizes to reward scientific merit and excellence

Winners of poster prize competitions hosted at EMBO-sponsored workshops, conference series and ESF-EMBO Symposia receive a one-year subscription to *EMBO reports* and special mention in *EMBOencounters*.

Congratulations to winners of competitions held at recent events:

Alexander Karlas (Berlin, Germany) for the poster *Identification of host cell factors involved in influenza infection cycle* presented at ESF-EMBO Symposium on *Antiviral applications of RNA interference*, 5–10 April 2008, Sant Feliu de Guixols, Spain.

Maria Tutukina (Pushchino, Russia) for the poster *Transcription profile of the Escherichia coli *uxuR* gene* presented at EMBO Conference

Series on *Genomes 2008: Functional genomics of microorganisms*, 8–11 April 2008, Paris, France.

Analia Richeri (Montevideo, Uruguay) for the poster *Estrogen regulation of semaphorin expression in the rat uterus* presented at EMBO Workshop on *Semaphorin function and mechanisms of action*, 8–11 May 2008, Cernay-La-Ville, France.

■ www.embo.org/courses_workshops

Homo sapiens: united or divided by cultural evolution?

8th EMBO/EMBL Joint Conference on Science & Society

The Future of Our Species – Evolution, Disease and Sustainable Development

Modern biology has determined the geographical origin of modern humans, as noted by *Mark Stoneking* from Leipzig, Germany. We radiated from Africa: that is what our mitochondrial DNA says. But where are we going? Can the natural sciences answer that question? *Jay T. Stock* from Cambridge, UK, synthesised the various influences governing human evolution, concluding that although some genetic evolution had occurred since modern humans arose — such as the lactase gene and reduced tooth size — cultural evolution overwhelmingly dictated our future. And our future will increasingly be influenced by how we choose to use biotechnology, hailed as the technology of the 21st century.

Perhaps it is time for the social sciences to shine too. They should give us vital insights into how best to use our biotechnological prowess to improve human lives for all. *Jerome Barkow* from Halifax, Canada, remarked that we need social science expertise to help us manage and use technologies via robust institutions. And one would sincerely hope that this extends to managing human progress in ways that respect the environment and people in poorer countries. The reality of human existence for most people on this planet is a fight against disease and poverty, a situation exacerbated by the unsustainable economic development of the rest of the world.

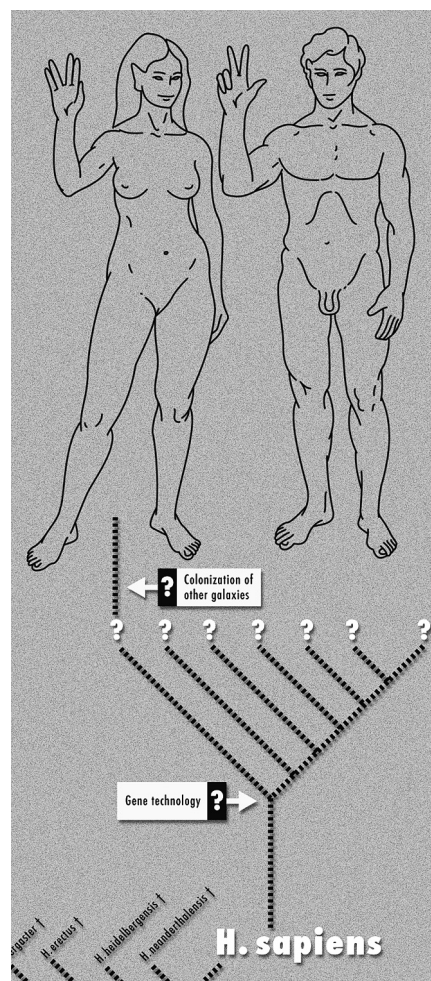
In 30 to 40 years from now, consumption habits of rich countries will start literally to take land away from developing countries, according to *Stefan Brinzeu* from Wuppertal, Germany. *Chris Thomas* from York, UK, echoed this concern: countries with the largest CO₂ output have the smallest climate changes and bio-fuels are a crackpot idea. By 2050 we may well have lost 25 percent of terrestrial species and there is no agreement on who pays for the damage.

Cultural evolution, driven by technology and globalisation, is widening the gap between the priorities and living conditions of the wealthy and the poor. And it continues to be wealthy economies that develop and rule the technologies. It would be hard to imagine human enhancement technology benefiting many people on this planet: we cannot even accept that investment in addressing major diseases would provide a net economic payoff. Visionary writers such as *H.G. Wells* have warned us of futures in which the human race divides. Their basic premise was not very futuristic. It was already happening before their eyes.

Andrew Moore

A DVD of conference highlights is available on request by writing to scisoc@embo.org.

■ www.embo.org/scisoc/conference07.html



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.

THE
EMBO
JOURNAL

research articles

Regulation of endocytic recycling by *C. elegans* Rab35 and its regulator RME-4, a coated-pit protein

Sato M, Sato K, Liou W, Pant S, Harada A, Grant BD

EMBO J 27(8): 1183–1196

VE-cadherin is a critical endothelial regulator of TGF- β signalling

Rudini N, Felici A, Giampietro C, Lampugnani M, Corada M, Swirsding K, Garrè M, Liebner S, Letarte M, ten Dijke P, Dejana E

EMBO J 27(7): 993–1004

ShcA signalling is essential for tumour progression in mouse models of human breast cancer

Ursini-Siegel J, Hardy WR, Zuo D, Lam SH, Sanguin-Gendreau V, Cardiff RD, Pawson T, Muller WJ

EMBO J 27(6): 910–920

TLC1 RNA nucleo-cytoplasmic trafficking links telomerase biogenesis to its recruitment to telomeres

Gallardo F, Olivier C, Dandjinou AT, Wellinger RJ, Chartrand P

EMBO J 27(5): 748–757

The mammalian formin FHOD1 is activated through phosphorylation by ROCK and mediates thrombin-induced stress fibre formation in endothelial cells

Takeya R, Taniguchi K, Narumiya S, Sumimoto H

EMBO J 27(4): 618–628

Cohesins localize with CTCF at the KSHV latency control region and at cellular c-myc and H19/Igf2 insulators

Stedman W, Kang H, Lin S, Kissil JL, Bartolomei MS, Lieberman PM

EMBO J 27(4): 654–666

www.embojournal.org

EMBO
reports

science & society

How do we ask for money?

A view of funding for basic research

Schwartzman J-M & Schwartzman J-B

EMBO rep 9: 216–220

A question of method. *The ethics of managing conflicts of interest*

Hurst SA & Mauron A

EMBO rep 9: 119–123

reviews

ChIPping away at gene regulation

Massie CE & Mills IG

EMBO rep 9: 337–343

Second meiotic arrest and exit in frogs and mice

Perry ACF & Verlhac M-H

EMBO rep 9: 246–251

scientific reports

Enzyme structural plasticity and the emergence of broad-spectrum antibiotic resistance

Maurice F, Broutin I, Podglajen I, Benas P, Collatz E, Dardel F

EMBO rep 9: 344–349

Lentivector-mediated rescue from cerebellar ataxia in a mouse model of spinocerebellar ataxia

Torashima T, Koyama C, Iizuka A, Mitsumura K, Takayama K, Yanagi S, Oue M, Yamaguchi H, Hirai H

EMBO rep 9: 393–399

www.emboreports.org

molecular
systems
biology

review

Theoretical and experimental approaches to understand morphogen gradients

Ibañes M & Izpisua-Belmonte JC

Molecular Systems Biology 4: 176

doi:10.1038/msb.2008.14

reports

A synthetic *Escherichia coli* predator–prey ecosystem

Balagaddé FK, Song H, Ozaki J, Collins CH, Barnett M, Arnold FH, Quake SR, You L

Molecular Systems Biology 4: 187

doi:10.1038/msb.2008.24

Ultrasensitive gene regulation by positive feedback loops in nucleosome modification

Sneppen K, Micheelsen MA, Dodd IB

Molecular Systems Biology 4: 182

doi:10.1038/msb.2008.21

research articles

Probiotic modulation of symbiotic gut microbial–host metabolic interactions in a humanized microbiome mouse model

Martin F-PJ, Wang Y, Sprenger N, Yap IKS,

Lundstedt T, Lek P, Rezzi S, Ramadan Z,

van Bladeren P, Fay LB, Kochhar S,

Lindon JC, Holmes E, Nicholson JK

Molecular Systems Biology 4: 157

doi:10.1038/msb4100190

Genomic analysis of estrogen cascade reveals histone variant H2A.Z associated with breast cancer progression

Hua S, Kallen CB, Dhar R, Baquero MT,

Mason CE, Russell BA, Shah PK, Liu J,

Khramtsov A, Tretiakova MS, Krausz TN,

Olopade OI, Rimm DL, White KP

Molecular Systems Biology 4: 188

doi:10.1038/msb.2008.25

www.molecularsystemsbiology.com

Forging the links between research and clinic

EMBO Molecular Medicine planned journal launch in 2009

Have you noticed the increasing commitment of EMBO to molecular medicine? In 2006, EMBO Council proposed to strengthen activities in this important field at the interface between clinical research and basic biology. A follow-up survey of members and young investigators revealed that a majority¹ of the 381 respondents were already active in molecular medicine or expected to be within five years.

EMBO Courses & Workshops now supports an annual molecular medicine workshop and applications for EMBO Molecular Medicine Fellowships were invited for the first time at the end of 2007.

Latest in efforts to forge links between research and the clinic is the early 2009 launch of *EMBO Molecular Medicine* – a peer-reviewed journal to be published in print and online.

Of interest to both medical and basic scientists, *EMBO Molecular Medicine* will publish original research providing novel and relevant

molecular insight into the cellular and systemic processes underlying defined human diseases. Articles should offer new perspectives for clinical application in prevention, diagnosis, treatment and therapy. Studies based on model organisms also fall within the scope of the journal provided that results are evidently and directly relevant to human disease.

The journal expects to publish up to 150 research papers annually for the first two years, aiming to double that number within five years. Additional content will include editorials, news and views, and short reviews. *EMBO Molecular Medicine* will be supported by an in-house editor, a group of Senior Editors (see below) and a larger Advisory Board.

¹September 2006 survey of EMBO Members & Young Investigators – 81% respondents

EMBO Molecular Medicine

Call for papers

July 2008

Senior Editors – *EMBO Molecular Medicine*



Dario R. Alessi
UK



Giulio Cossu
Italy



Fred H. Gage
US



Matthias Hentze
Germany



Philippe Sansonetti
France



Bart de Strooper
Belgium

Living in an imperfect world

The EMBO Journal focuses on quality control

Life does not always go as planned. We oversleep, stub our toes, cars collide. But we adjust our schedules, limp around for a while, let off steam and, well, get on with it. Likewise, the complex cellular world of molecular machines and organelles can be full of small errors and looming catastrophes. And that too is okay

because quality control mechanisms exist to edit mistakes and maintain functionality.

The EMBO Journal treats readers to a series of eight reviews in its *FOCUS on Quality Control*. Each review, along with supplementary information and teaching materials, is available online and articles were published

in three subsequent print issues (Volume 27, Numbers 2, 3 and 4). The collection highlights different aspects of cellular quality control and relevance for human diseases, including mitochondrial and ER processes, protein folding and degradation, as well as quality control in RNA and DNA metabolism.

Readers will find the reviews – authored by experts in their respective fields – give numerous examples of the workings of quality control and its analysis. They can explore parallels and differences between quality control mechanisms and identify emerging issues and trends.

■ www.embojournal.org

EMBO Members have free access to The EMBO Journal via the password-protected members secure area on the EMBO website.



Recently on The Seven Stones

The *Molecular Systems Biology* blog on Systems & Synthetic Biology



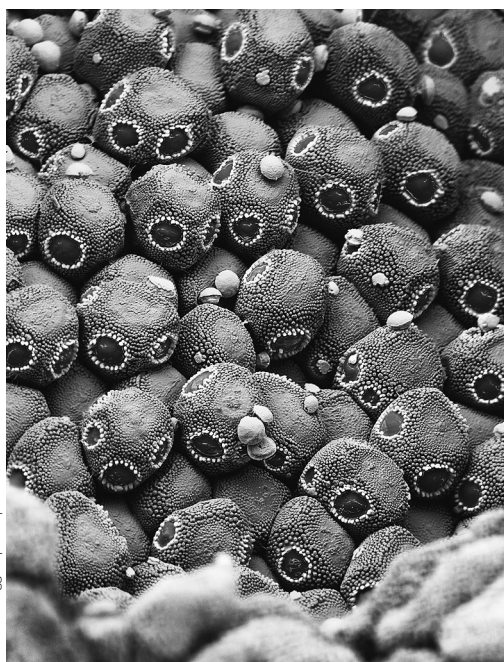
I hear sometimes the claim that within 5–10 years, more than 95% of the scientific literature is going to be read by computers only. Possible. But what if 95% of scientific papers could be 'written' by computers? In other words, rather than mining thousands of unread papers, the scientist of the future may rather search the web for relevant data first and integrate it to generate – or 'write' – novel insight. In fact, integration of large datasets already represents a major field of research in systems biology. New publishing models should

thus 'embed' more structured data into online publications. At the extreme, one could even imagine to publish 'naked' datasets, without any 'stories' around them. Even if the good old-fashioned papers are probably not going to disappear as publication units, there might be some equilibrium to find between papers that will never be read except by a text mining engine and pure datasets, published as a resource, easier to search and to integrate. If assorted with proper credit attribution mechanisms and metrics of impact, data-rich (or even

data-only) publications may represent an alternative model complementing the traditional 'paper' format. It would prevent the loss of useful data otherwise buried in verbal descriptions and, most importantly, would hopefully stimulate web-wide integration of disparate datasets. À suivre...

Read and comment on the original version of this post at

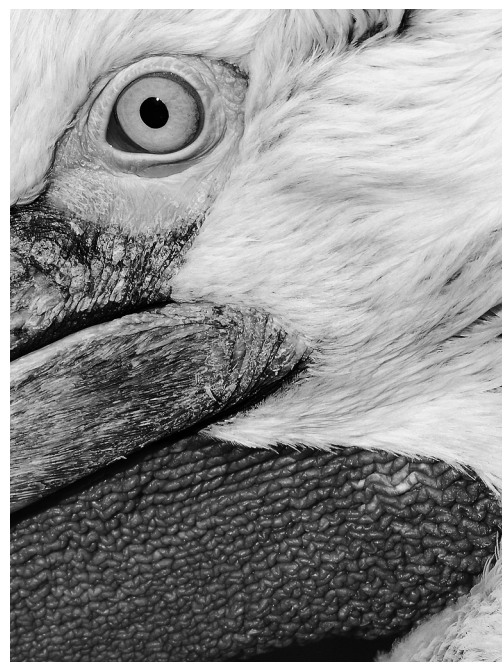
■ http://blog-msb.embo.org/blog/2008/03/data_or_insight.html



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Making the cover – a fungal fruitbody and a pelican

The *EMBO Journal*
cover contest



© Urs Albrecht | Fribourg

Sudden plant death and an up-close encounter in a Swiss animal park brought unexpected rewards to two readers of *The EMBO Journal* recently. Both were winners in the fifth annual cover contest.

More than 700 entries from all over the world competed for the top prizes in the scientific and non-scientific categories as well as the opportunity to enliven the covers of the journal published twice a month. All submitted images were printed and displayed at EMBO for a jury of editors and other staff to deliberate the merits of each entry.

Shades of tan, violet and turquoise combined in the scanning electron microscope image of a fungal fruitbody to win first prize for the best scientific image (Volume 27, Number 5). **Martin Oeggerli**, PhD, from the Institute of Pathology at the University Hospital Basel, discovered the fungal attack of a plant just outside his front door. His post-mortem analysis discovered the artful and tiny spores.

First prize in the non-scientific category went to **Urs Albrecht**, Professor of Biochemistry at the University of Fribourg in Switzerland (Volume 27, Number 6). His lens

captured the keen eye of a Dalmatian pelican, reminding readers to watch out for the detail as they peruse journal articles.

Both winners receive free subscriptions to *The EMBO Journal* and *EMBO reports* in addition to publication of their images as covers of the journal.

■ www.embojournal.org

EMBO meets Taiwan

Bertrand R. Jordan, EMBO Member, Marseille-Nice Genopole, France



Left to right, Terence Tai, coordinator of the ELSI programme, Andrew Wang, Director of NRPGM, and Bertrand Jordan

Taiwan – a third-world country?

Taiwan, a small island with currently more than 20 million inhabitants, is still sometimes seen as a place where cheap trinkets are manufactured, a relatively poor and underdeveloped nation with little to commend in the fields of modern technology and science. Yet, within a few decades, it has transformed itself from a third world country ruled by a dictatorship into a relatively affluent modern democracy with good infrastructure, whose per capita GNP is close to that of France. Much of its economy has been built on the microelectronics industry: Taiwan is, for example, the major world-wide producer of laptop computers.

Science-wise, the transformation also has been spectacular. Taiwanese citizens who had studied for a PhD in the US, as well as scientists already established in that country, were lured back to the island by the establishment of very well equipped laboratories, fairly generous grants and the opportunity to set up their own research groups somewhat more easily than in the US. This "reverse brain drain", which began in the 1980's, now has resulted in a number of first-rate institutes enjoying excellent facilities and whose groups publish in the major international scientific journals, including *The EMBO Journal*. Of course there are some problems, as anywhere: there still is a relative lack of outstanding senior scientists, the collaboration between different institutes and universities is not always optimal, and the

administrative infrastructure can sometimes be a hindrance rather than a help... but on the whole the research environment is quite comparable to what can be found in Germany or in the US – often with more abundant and up-to-date equipment.

Biology and biotechnology in Taiwan: the NRPGM

This positive picture is particularly true in the biological sciences, which have been a focus of investment during the last twenty years. Indeed one of the objectives of successive governments is to repeat in biotechnology the successes scored by Taiwan in electronics, that is to build a powerful biotech industry able to drive the island's economic development into the 21st century. One of the major instruments to this end is the National Research Program for Genomic Medicine (NRPGM), initiated in 2002, which aims to "develop Taiwan's visibility and international competitive edge in bio-medical research" as well as to "act as an initiator for the local bio-medical industry". The NRPGM is planned to run until 2012, with annual funding of the order of 40 million euro, and supports extensive core facilities as well as research projects. The core facilities, which are well funded and well equipped, cover the usual technologies, from high-speed sequencing to large-scale SNP mapping, as well as functional genomics (KO and KI mice, ENU mutagenesis and a large RNAi core). The grants

finance research programs in the general field of genomic medicine, with particular focus on liver and lung cancer as well as on infectious diseases. Much of this infrastructure, and some of the most dynamic groups, are concentrated in Academia Sinica, a multidisciplinary institution somewhat similar to the Max Planck Gesellschaft in Germany, whose institutes are located on a large campus in Taipei. Some other core facilities, and a number of excellent research groups, are in the major universities such as the National Taiwan University and the Yang Ming University in Taipei, and others. Almost all the groups involved are led by Chinese scientists who have been trained in the US, usually at the postdoctoral level, and who keep active connections with a number of laboratories in that country.

Why EMBO?

Because of the recent history sketched above, the major foreign connection of Taiwanese science is with the US (Japan, of course much closer, suffers from bad memories of the Second World War). European science does not have high visibility in spite of its fairly good general level, as few Chinese scientists have worked in the EU, and few connections have been established. In addition, seen from Taiwan, Europe appears as a fragmented set of nations with different languages and different types of organization – a complicated world to interact with. Yet leaders of the local scientific community are aware of the need to establish a more balanced relationship with the world scientific establishment, and, for Europe, Taiwan is a window on the Chinese world that we cannot afford to ignore. Having been involved with Taiwan for a long time, first as coordinator of France-Taiwan collaborations in life sciences (1991–1999), then as member of the advisory committee for the NRPGM since its inception, it seemed to me that interactions between EMBO and the NRPGM could be mutually beneficial. I was encouraged in this initiative both by the current EMBO executive director and by the director of the NRPGM. This seems particularly timely now that EMBO is initiating specific actions in molecular medicine (fellowships, workshops and a new journal for 2009).

What can be done?

EMBO, and the possibilities it offers, are largely unknown in Taiwan. Our organization will now be prominently *(continued on page 12)* → →

EMBO meets Taiwan (cont.)

Bertrand R. Jordan, EMBO Member, Marseille-Nice Genopole, France

→ → (continued from page 11) displayed on the NRPGM website, and in particular the availability of EMBO Fellowships – long and short-term – open to Taiwanese scientists will be advertised. It would certainly be to everybody's advantage to attract some top-level post-docs from that country to EMBO countries. The possibility of inviting European scientists as EMBO lecturers in suitable meetings or workshops held in Taiwan is now known to NRPGM, and initial steps have been taken to use this opportunity. Further in the future, organizing an EMBO workshop or lecture course in Taiwan

is perfectly conceivable; in addition, the EMBO Science & Society programme could certainly interact fruitfully with the ELSI (Ethical, Legal and Social Issues) group that operates within NRPGM – again, preliminary steps have been taken. Before I conclude, let me point out that scientific interactions with Taiwan are not only fruitful because of the good level of local laboratories, but also extremely enjoyable because of the warm hospitality received in this very dynamic, easy going yet highly exotic island.

Useful links and contacts ►►

Bertrand Jordan for general enquiries and contact information:

■ jordan@genopole.univ-mrs.fr

NRPGM website:

■ <http://nrpgm.sinica.edu.tw/>

Prof. Andrew Wang, director of the NRPGM

■ ahjwang@gate.sinica.edu.tw

Prof. Terence Tai, coordinator of

the NRPGM ELSI program:

■ ttai@sinica.edu.tw



Scientists wanted in Warm Spring Harbor!

Mediterranean Institute for Life Sciences in Split, Croatia

The website of the newly-founded Mediterranean Institute for Life Sciences (MedILS) provides detailed instructions on how to get to its "wonderful, yet hidden location." And *Bojan Žagrović*, awarded an EMBO Installation Grant at the end of 2007, is one of the lucky ones to work there. Website pictures show cloistered buildings surrounded by verdant forest overlooking the exquisite coastline in Split, Croatia.

Established little more than a year ago when the first group of researchers moved in, MedILS is jokingly dubbed 'Warm Spring Harbor'. Of course, the institute looks up to the world-famous Cold Spring Harbor as role model to become a powerful research center

and a vibrant conference spot. Being located in the UNESCO-protected ancient city of Split is an added advantage.

Today, the institute already has six active groups, with students from five different countries, covering a range of topics in modern molecular biology from bacterial and yeast genetics to tumor biology to bioinformatics and computational biophysics.

The biggest expansion of the institute is still ahead: institute officials expect to recruit several new group leaders soon. With open positions for graduate students, postdocs and senior researchers, MedILS invites all interested parties to visit its web page at www.medils.hr or write directly to medils@medils.hr.

More life science research in Scotland

New Division of Molecular and Environmental Microbiology at Uni of Dundee

Life science research continues to expand at the University of Dundee with the opening of a new division of Molecular and Environmental Microbiology. Research focuses on understanding both fundamental and applied processes carried out by prokaryotic and eukaryotic microorganisms and currently comprises five independent research groups working on a variety of model systems.

Professor *Geoff Gadd*, Division Head, says that "Since microbial activities underpin all aspects of our daily lives, this encouragement and support for microbiology is very timely. We are now actively searching worldwide for more excellent recruits to the Division to reinforce existing research programmes and also

to initiate novel research directions in microbiology relevant to, for example, health, the environment and biotechnology. Our application of modern molecular and analytical techniques now ensures a level of understanding that we

could not imagine a few years ago and we are looking forward to exciting discoveries".

Two new professors have already been recruited to the Division with *Tracy Palmer* and *Frank Sargent* arriving from the John Innes

Centre in Norwich and the University of East Anglia respectively.

For more information:

■ www.lifesci.dundee.ac.uk/mem/

Postdoc Association Intranet Search

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Division of Signal Transduction Therapy
Wellcome Trust Centre for Gene Regulation and Expression
Molecular and Environmental Microbiology

Division of Molecular and Environmental Microbiology
The Division of Molecular and Environmental Microbiology is located in the MS/WTB/UBC complex.

More info on MEM:
List of seminars hosted by this Division
Postgraduate opportunities available within this Division
Publications

Head of Division: Professor Geoff Gadd
Deputy Head of Division: Professor Tracy Palmer
Division Secretary:
Lab Manager: Dr. Jacqueline Heilbronn

Global Research Partnerships help establish new Saudi Arabia institute

EMBO Member awarded KAUST GRP Investigator grant



GRP Technical Symposium awards ceremony in Jeddah, Saudi Arabia, on 27 May 2008 (left to right): Choon Fong Shih (President Designate, KAUST), Anna Tramontano, H.E. Minister Ali Ibrahim Al-Naimi (Minister of Petroleum and Mineral Resources; KAUST Board of Trustees), Nadhmi Al-Nasr (Interim President, KAUST)

Anna Tramontano, EMBO Member and professor of biochemistry at the University of Rome, La Sapienza in Italy, is one of twelve highly accomplished scientists and engineers in the first round of Global Research Partnerships (GRP) Investigator grants to be awarded by a new institute in Saudi Arabia.

King Abdullah University of Science and Technology (KAUST) plans to become a major contributor to the global research community through the GRP, enabling researchers

from around the globe to work together to solve challenging scientific and technological problems. Also envisaged as a mechanism to attract students and faculty of exceptional talent, KAUST hopes the GRP will create a leading research programme for the university and extend scientific knowledge for the benefit of humanity.

More than 60 nominations from 38 institutions qualified for the five-year GRP Investigator

grants resulting in the announcement of 12 awardees in March 2008.

Professor Tramontano's KAUST research – *Systems View of Biological Organisms: Computational Approach* – will focus on understanding living organisms at the molecular level and on developing methods to accurately simulate how a disease can be controlled or prevented using different techniques. Her findings have the potential to significantly impact human health and biotechnology. She will utilize and advance current understanding of living organisms at the component level as well as available computational tools to understand the integrated and interacting complexity of all these components. As part of her work with KAUST, she will organize Saudi student workshops in conjunction with major conferences to optimize KAUST's visibility.

The range of GRP research topics includes water desalination, renewable and sustainable next-generation energy sources, genomics of salt-tolerant plants, durable and environmentally friendly construction materials, hydrocarbon utility, low-cost solar cell efficiency, and disease immunization.

For more information about KAUST and the GRP Investigator grants:

■ www.kaust.edu.sa/research/global-partnership.aspx

Learning to lead

Experiences of an EMBO Fellow in the US by Fabian V Filipp

European researcher Svante Pääbo decided to spend his postdoctoral time at the Department of Biochemistry at the University of California at Berkeley, USA. Although his career can be described as anything but ordinary, he is a perfect example of a postdoc EMBO Fellow. Benefiting from an intense but successful research period in the US, Pääbo returned to

Europe to establish his own research laboratory. But now, 20 years later, the research climate on both continents has changed. At the beginning of 2007 the EMBO Long-term Fellowship Programme provided me with the chance to find out for myself when this former EMBL PhD student headed out to University of California San Diego (UCSD) to discover what

makes a postdoctoral stay in the US a special experience.

The time as a postdoc is meant to be a period of transition. How can you move from being a postdoctoral fellow to being an effective, productive and dynamic head of a scientific laboratory? My current boss and mentor at UCSD, (continued on page 14) → →



photos by Fabian V Filipp

EVENTS

■ *EMBO Members and Young Investigators*

EMBO Members **Crisanto Gutierrez**, **Ueli Grossniklaus** and **Ben Scheres** are organizing **Chromatin at the nexus between cell division and differentiation** in Madrid from 30 June to 2 July.

Alfred Nordheim, EMBO Member from Tübingen University is organizer of the **International Congress of Genetics** to be held in Berlin from 12–17 July 2008.

Marco Milan, EMBO Young Investigator, and EMBO Member **Jordi Casanova** are organizing the **Barcelona BioMed Conference on Morphogenesis and Cell Behaviour** in Barcelona from 6–8 October 2008.

3rd ESF Functional Genomics Conference in Innsbruck from 1–4 October 2008

TRANSITIONS

■ *EMBO Members*

Carlos Martínez Alonso, of the National Center for Biotechnology in Madrid, Spain and **EMBC President from 1995–1999**, has been appointed Secretary of State for Research in Spain.

Terrence H. Rabbits now heads up the Leeds Institute of Molecular Medicine conducting translational research into human diseases.

Learning to lead (cont.)

Experiences of an EMBO Fellow in the US by *Fabian V Filipp*

→ → (continued from page 13) *Stanley J Opella*, described the step from postdoc to principal researcher as follows: “We were thrown into the ocean and those who quickly learned to swim, managed to survive! Fortunately the situation is different today.” The La Jolla Science Mesa comprises a very active community of postdoctoral fellows and collects and shares information resources to enhance their professional experience. This past February, some 150 participants gathered during the San Diego Lab Management Course to learn about and discuss future professions in academia.

“Scientists rarely receive formal [leadership] training before they are expected to head a lab or group,” said executive coach *Greg Goates*, who spoke on management and leadership styles at the event. In fact, he noted, one recent survey by ScienceCareers.org showed, that of the principal investigators, postdocs, and graduate students surveyed, nearly 90 percent had never received formal management training. The two-day symposium – organized jointly by the San Diego Postdoctoral Training Consortium – aimed to fill this gap.

A university generally offers the best opportunities for scientists pursuing an academic tenure-track position. “Postdocs gain experience in research, lab management, teaching and grant writing, all in one place,” stated *Jennifer Oh*, Director of Postdoctoral Scholar Affairs, University of California, San Diego. “It is important to build a portfolio of different skills that you will use during the course of your academic career.”

“There is a difference between management and leadership,” explained Goates. “We manage and control budgets or processes. However, an effective leader provides the envi-

ronment to let action take place – he guides others to do their best work.” In his session on leadership and management styles, Goates showed the importance of leadership flexibility to tailoring your supervisory style to match the skill level and commitment of the person you’re leading.

Team work at its best was already required during the course. Reflecting on case studies, workshop participants gathered in small groups to brainstorm on what leadership flexibility might look like in the lab. For a lab member who is high on both the competence and commitment spectrum, techniques could include encouraging independent thinking, supporting the individual’s professional development, and offering empathy and supportive feedback.

Becoming an effective leader requires more than mastering tasks such as creating budgets, writing grants, and designing projects. A laboratory head has to create a vision and set the direction for the team. Among the goals of postdoctoral training on University of California campuses is the fostering of expertise in science communication. “Individual coaching is a key component in the program at UCSD; it functions as a catalyst in raising the performance level of each participant because it is direct and immediate,” explains *Martha Stacklin*, UCSD Center of Teaching Development.

The symposium addressed specific aspects of soft skills required when entering the academic job market, navigating the university structure and tenure process, time management, managing start-up budgets and projects, staffing your lab, and handling communication and conflict. Junior faculty reported on

their experiences in setting up laboratories and staffing them with capable people. “Start to organize your independent lab set-up in the last year of your postdoc. Recently hired people can tell you best what your needs will be,” recommended *Kerri Mowen* who recently started her own lab at the Scripps Research Institute. “There are many ways to enhance your start-up package if you manage to integrate facility services and core equipment efficiently,” said Mowen.

The social component of the event was well received by postdocs from different research institutes in San Diego, like UCSD, Scripps, Burnham, and Salk. “[Such a shared symposium] is a good opportunity for networking and exchanging ideas about common needs with other postdocs,” *Cecile Loudet* from the Burnham Institute said.

Chatting with other postdocs and principal investigators is important. Events like the San Diego Lab Management Symposium facilitate contacts and build on the collegiality level across the research institutes that usually compete for the same pool of funding. Establishing a network in the science community can be fun and you may find out that this could be the first step to getting a part time teaching appointment at your University.

EMBO Fellows Meeting US will be held from 7–9 November at Harvard Medical School, Boston. For more information contact:

■ fellowships@embo.org.

For information about **EMBO Laboratory Management Courses** for postdocs:

■ www.embo.org/yip/lab_fellowships.html

Next issue:

The next EMBOencounters issue — autumn / winter 2008 — will be dispatched early in December 2008. You can send your contributions/news to: communications@embo.org at any time. The deadline for the autumn issue is **30 October 2008**.



AWARDS OF EXCELLENCE

EMBO Members

US National Academy of Science

Sir Philip Cohen, of the University of Dundee, has been elected a member of the National Academy of Sciences (NAS) in the US for his excellence in original scientific research. Membership in the NAS is one of the highest honours given to a scientist or engineer in the United States.

Louis-Jeantet Prize for Medicine 2008

Louis-Jeantet Foundation

Pascale Cossart from the Pasteur Institute was awarded the 2008 Louis-Jeantet Prize for Medicine for her pioneering fundamental research work on *Listeria monocytogenes*, a bacterium that causes Listeriosis, a serious foodborne infection. In 2008, she also received the **Robert Koch's Foundation Prize** in Berlin and the **Descartes Prize** awarded by the European Commission.

Gottfried Wilhelm Leibniz-Preis

German Research Foundation

Elisa Izaurralde from the Max Planck Institute for Developmental Biology in Tübingen (Germany) has been jointly awarded this prize with **Elena Conti** for their work providing fundamental insight into intracellular transport and metabolism of RNA. The prize is the most prestigious German research prize in recognition of excellent scientific work, with a maximum of €2.5 million per award.

German Academy of Sciences Leopoldina

Markus Affolter from Neurobiology/Developmental Biology at the Biozentrum, University of Basel, has been accepted as a member by the renowned German Academy of Sciences Leopoldina. Membership in the Leopoldina, the oldest academic society for natural science and medical research in Germany, is considered to be one of the highest academic honours awarded to scientists by an institution in Germany.

German Academy of Sciences Leopoldina

The Presidium of Leopoldina has also elected

Giulio Superti-Furga, Scientific Director of CeMM – Research Center for Molecular Medicine of the Austrian Academy of Sciences for a membership in recognition of scientific achievements and personal standing. His most significant scientific contributions are the elucidation of basic regulatory mechanisms of tyrosine kinases in human cancers and the discovery of fundamental organization principles of the proteome of higher organisms.

Benjamin Franklin Medal in Life Science

The Franklin Institute

David Baulcombe, of the University of Cambridge, was one of the recipients of this Medal for the discovery of small RNAs that turn off genes. Through his research, done jointly with Victor Ambros and Gary Ruvkun, the scientist discovered that the role of RNA in the cellular processes has a much wider scope than assumed. The discovery opens the way to creating new genetic tools for basic research and improving agriculture and human health.

Gay-Lussac-Humboldt Prize

French Ministry of Education and Research / Alexander von Humboldt Foundation

Jörg Hacker, of the Julius-Maximilians-University in Würzburg, received this prize for advancing Franco-German cooperation in microbiology, in particular for his study on pests and Legionnaires' disease conducted jointly with researchers from the Pasteur Institute in Paris.

Novo Nordic Prize

Novo Nordisk Foundation

The Novo Nordic Prize for 2008 goes to Professor **Kristian Helin**, Director of the Biotech Research and Innovation Centre (BRIC) at the University of Copenhagen, for his groundbreaking discoveries of the mechanisms that regulate the division and development of cells.

Dorothea Schlözer Medal

University of Göttingen

Mary Osborn from the Max Planck Institute for Biophysical Chemistry in Göttingen was awarded this Medal to honour her achievements in scientific research and her acties in promoting the idea of gender mainstreaming.

EMBO Young Investigators

Walther-Flemming-Medal

German Society for Cell Biology

Thorsten Hoppe from the Department of Neuronal Protein Degradation at the Center for Molecular Neurobiology in Hamburg won this medal in recognition of his recent scientific achievements. This year he also received the **Felix-Jerusalem Award** from the Deutsche Gesellschaft für Muskelkranke for his study on neuromuscular diseases.

A GOOD READ – PUBLICATIONS FROM THE EMBO COMMUNITY

articles

Poly(ADP-ribose)-binding zinc finger motifs in DNA repair/checkpoint proteins

Ivan Ahel, Dragana Ahel (EMBO Fellows) *et al.*
Nature **451**: 81–85
(3 Jan 2008)

Cyclical DNA methylation of a transcriptionally active promoter

Frank Gannon (EMBO Member & former Executive Director) *et al.*
Nature **452**: 45–50
(6 March 2008)

Transient cyclical methylation of promoter DNA

Frank Gannon (EMBO Member & former Executive Director) *et al.*
Nature **452**: 112–115
(6 March 2008)

The differentiation of human T_H-17 cells requires transforming growth factor- β and induction of the nuclear receptor ROR γ t

Nicolas Manel (EMBO Fellow) *et al.*
Nature Immunology **9**: 641–649
(4 May 2008)

A receptor that mediates the post-mating switch in *Drosophila* reproductive behaviour

Carlos Ribeiro (EMBO Fellow) *et al.*
Nature **451**: 33–37
(3 Jan 2008)

Sex determination involves synergistic action of SRY and SF1 on a specific Sox9 enhancer

Ryohei Sekido (EMBO Fellow) *et al.*
Nature **453**: 930–934
(12 Jun 2008)

Foundations in Cancer Research
The Turns of Life and Science

Jan Svoboda (EMBO Member)
Advances in Cancer Research **99**: 1–32
(2008)

Angiogenesis selectively requires the p110 α isoform of PI3K to control endothelial cell migration

Mariona Graupera, Julie Guillermet-Guibert (EMBO Fellows)
Nature **453**: 662–666
(29 May 2008)

Structural basis for the regulated protease and chaperone function of DegP

Tim Clausen (EMBO Young Investigator),
Helen R. Saibil (EMBO Member),
Nature (advance online publication)
doi: 10.1038/nature07004
(21 May 2008)

Molecular mechanism of energy conservation in polysulfide respiration

Mika Jormakka (EMBO Fellow) *et al.*
Nature Structural & Molecular Biology
(advance online publication)
doi: 10.1038/nsmb.1434
(8 June 2008)

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