

Encountering the organization



During the past 10 years EMBO has awarded around 2,000 post-doctoral fellowships, elected about 200 Young Investigators and supported over 1800 researchers via short-term fellowships. Moreover, since the start of the respective programme in 2006, 34 young group leaders received support through EMBO Installation Grants. The unquestioned quality of these programmes, which address the gifted individual researcher, is based as well on the selection process in which we can rely on the expertise of our dedicated membership, as we rely on EMBO policy to offer opportunities for its awardees to interact, communicate – form communities – a concept introduced by my predecessor *Frank Gannon*. The synergies and the spirit emerging in these communities sparks remarkable initiatives, of which a most impressive one – *EMBO Young Scientists Forum* – aims to support young

researchers and their groups in member states where research infrastructures are, despite all efforts, still insufficiently developed.

More than 5,000 scientists participate every year in the 70 to 80 events supported via EMBO Courses & Workshops Programme. This traditional core programme is now complemented by our annual broad-scope conference *The EMBO Meeting* and by the *EMBO|EMBL Symposia*.

This year's inaugural life science conference – *The EMBO Meeting* – in Amsterdam was exciting and spirited. It attracted over 1,300 participants, and I am confident that it will develop into a major annual event in life sciences in Europe. The first three *EMBO|EMBL Symposia* (see page 7) will be held in 2010 in the new EMBL Advanced Training Centre (ATC), which will seat up to 450 participants in the auditorium.

Thus, together with the publication of our four journals we can safely state that EMBO

indeed lives up to its original promise: to identify and foster talented scientists and to disseminate ideas, knowledge and technology across borders. It does so in a particularly sensible way by generating and sustaining its communities and by catalysing interactions between them (see figure 1).

Having all these fine programmes up and running, can we lean back in satisfaction? Of course not! There are considerable challenges ahead of us.

Taking, for example, a closer look at our activities throughout our member states reveals that even though EMBO is engaged in all of them, there are asymmetries, which worry. Thus, many young scientists leave their home country to gain further experience in other – frequently more suitable – research environments and for good reasons EMBO supports such mobility. However, as valuable as such mobility may be for a researcher's career, it frequently results in an → →

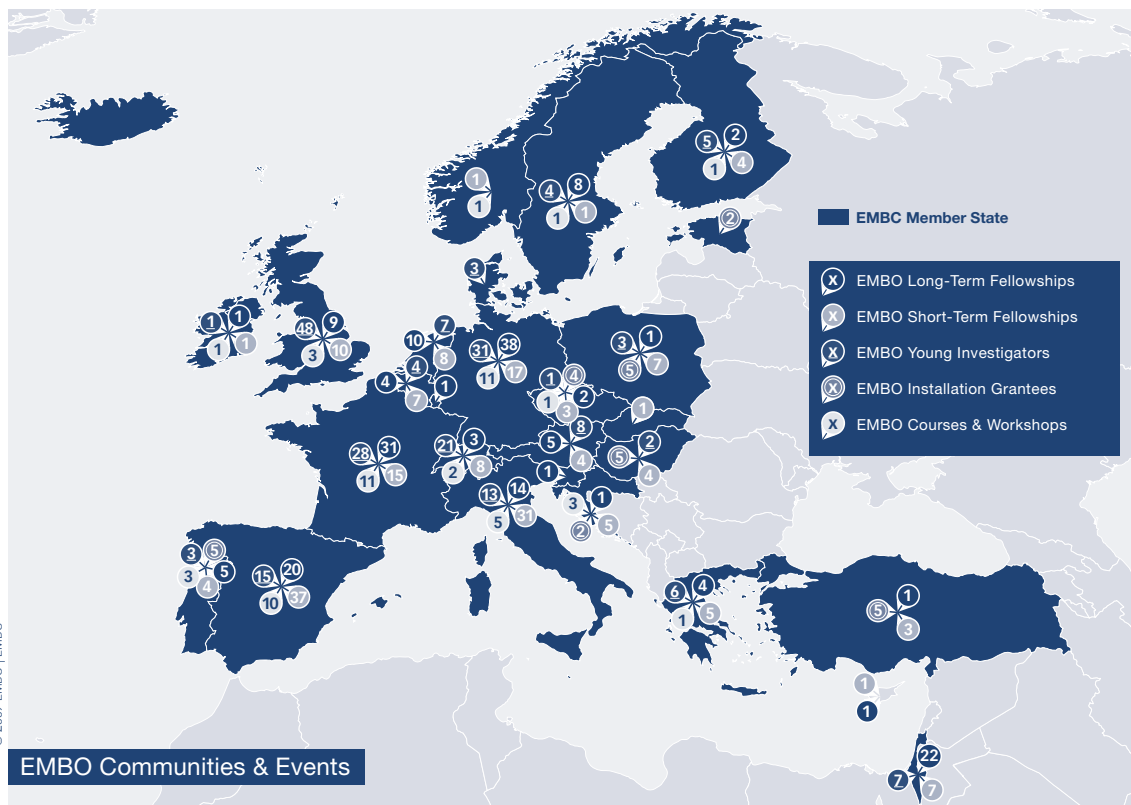


Fig. 1 | A snapshot of EMBO activities at the end of 2008.

Fellowships: EMBO Long-Term and Short-Term Fellowships awarded in 2008

EMBO Young Investigators: Young Investigators working in an EMBO Member State at the time of the application at the end of 2008

EMBO Installation Grants: Grants awarded from 2006 to 2008

EMBO Courses & Workshops: EMBO Courses, Workshops, Conference Series and Symposia held in 2008 in an EMBO Member State

Fostering talented scientists

(continued from page 1)

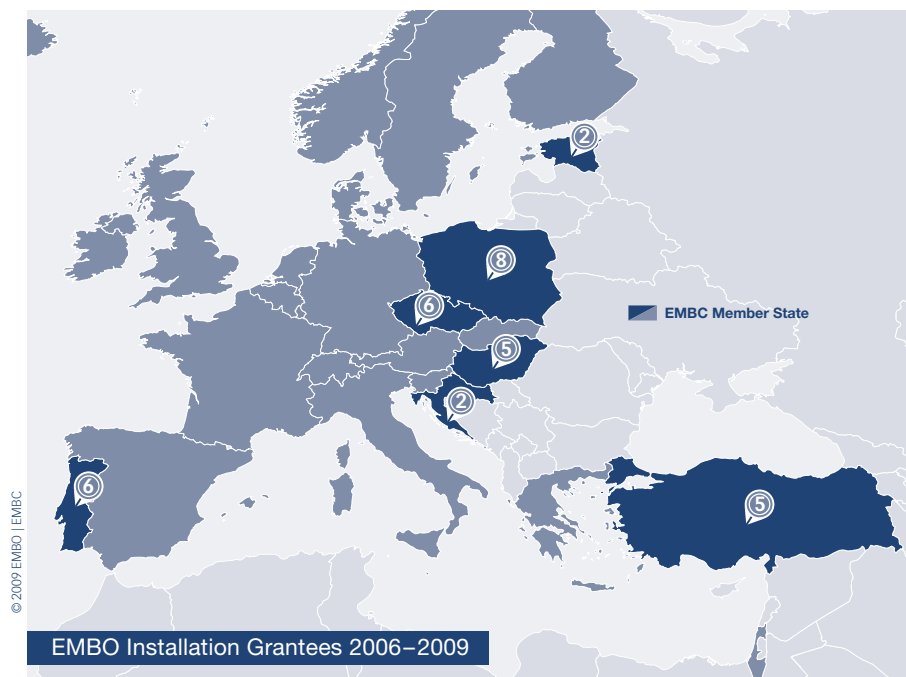


Fig. 2 | From 2006 to 2009 EMBO awarded 34 Installation Grants to researchers who set up their labs in Croatia, Czech Republic, Estonia, Hungary, Poland, Portugal and Turkey

→ → irreversible loss of talent urgently needed in countries which appear not as attractive due to their not yet sufficiently developed research infrastructures. The EMBO Installation Grant programme is conceived to counteract this side effect of mobility. It provides incentives for young scientists to set up independent research groups in countries cooperating in this programme (see figure 2). Clearly, there can be little doubt that science in Europe will be at its best only when centres of high quality in education and research are distributed throughout our member states in a balanced way, a goal which will need long-term commitments at various levels.

When the founders of EMBO – all eminent scientists – formulated their ideas about EMBO, they felt that “...Europe should be defined widely ...” and that “neighbouring countries” should not be neglected. In this spirit it seems today most appropriate to look beyond the borders of even our “widely defined” Europe. There is a growing interest of researchers and research organisations worldwide in a more intense exchange with European life scientists and particularly in the concepts and strategies developed and practised by EMBO. On the other hand, considering the breath-taking developments in numerous countries outside of Europe and the US/Canada, it will be

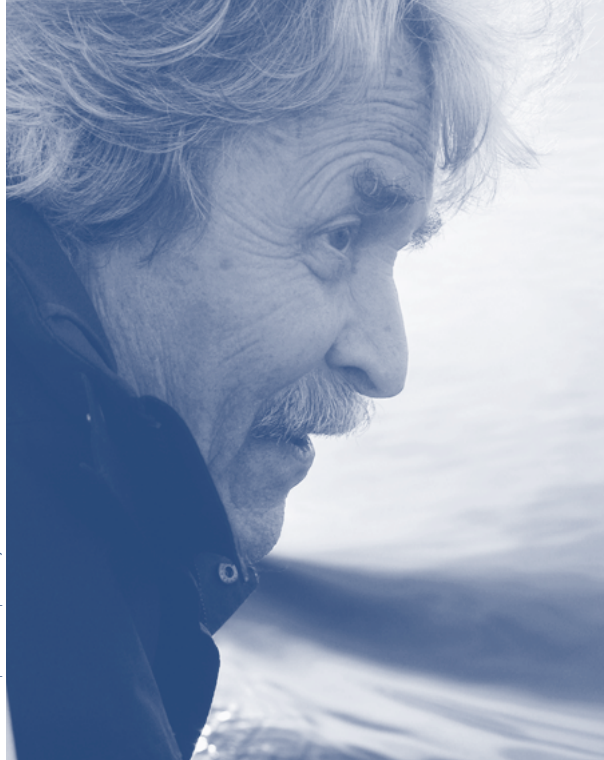
in the best interest of Europe to strengthen communication and exchange with respective countries. In the EMBO Global Exchange programme, initiated in 2009, the emphasis is on “exchange”, as a prerequisite for sustainable and fruitful relationships. During a first pilot phase, EMBO will focus its efforts and – exclusively for this reason – target its activities initially on India, China, Taiwan and Africa (for information see www.embo.org/programmes/global-exchange; see also page 4).

A further challenge for EMBO is the rapid development of techniques and approaches of scientific publishing – key words: open-access, hybrid models, author-paid-submissions, derivatisation, let alone the misuse of impact factors in judging the quality of individual scientists’ research achievements. EMBO, as a non-profit society, needs to engage in these important matters and to possibly take the lead in reforming a, in my view, most problematic overall situation. A first step has been taken earlier this year with the introduction of our “transparent editorial process” in *The EMBO Journal*. In this context, I am delighted to introduce to you *Dr. Bernd Pulverer*, our new *Head of Scientific Publication*, who joined us in November. As former Editor-in-Chief of *Nature Cell Biology*, Bernd will bring along much of the expertise EMBO will need to shape the future of its journals.

Finally, I would like to briefly report on our Science & Society Conference on *Food, sustainability and plant science: a global challenge*, which took place in November in Heidelberg. This well attended meeting, for which we successfully assembled a group of outstanding speakers, was scientifically exciting with respect to its societal and political implications, however, sobering and most alarming. It is obvious that present days politics worldwide hardly reflect the dramatic consequences awaiting us in the very near future if we continue to neglect food security and the ongoing dramatic decline of biodiversity. Life science can contribute to much needed solutions. Equally important is, however, that scientists speak up. They “have to become political,” as *David Baulcombe* phrased it. Our redefined Science & Society Programme will have a major focus on this theme, which together with the problem of energy consumption is, as we all know, of crucial importance for the future of mankind.

In December my almost three-year term at EMBO will end. It was an exciting “re-visit” after being quite engaged in the early 1970s when EMBO settled in Heidelberg. EMBO is a fine “enterprise”, paradigmatic in many ways: governed by simple and transparent rules in the spirit of its founders, lean and flexible in the execution of its programmes and outstanding in its impact to cost ratio. All is based on the dedicated support of our communities, particularly of our membership and its Council. For me it was a privilege to head the operation for a while and I would like to cordially thank the entire EMBO staff, many of whom have joined us during my term, for their dedication and loyalty. It was a pleasure to work with such a competent, spirited and stimulating team! Special thanks go to *Tim Hunt*, Chair of the EMBO Council, for his continued and refreshing engagement.

I wish my successor *Maria Leptin* as we say in German *eine glückliche Hand* in guiding and further developing a great scientific endeavour.



Hermann Bujard retires from EMBO, but not from the lab

Farewell symposium in the Operon Auditorium at EMBL

Hermann Bujard will step down as Director of EMBO at the end of December 2009, following the completion of his pre-defined term. With an active malaria vaccine research programme beginning pre-clinical evaluation, Hermann is looking forward to spending more time with his lab researchers who hope to address this important global health problem that impacts more than 40 percent of the world's population living in areas affected by malaria.

During Hermann's tenure as director, EMBO activities and publications have developed and received continued recognition for the support they offer to scientists through funding and exchange, and as platforms for dissemination of scientific research, information, ideas and concepts. New EMBO offerings introduced

during this period include a new scientific journal *EMBO Molecular Medicine*, an annual life science conference *The EMBO Meeting*, and *EMBO Global Exchange* – an initiative to support scientific progress worldwide.

Hermann has steered the review and amendments to EMBO Rules and Statutes, recently approved by the membership and by the EMBO Council. For the first time since the inauguration of EMBO, the membership election procedure was altered so that EMBO membership will in future more accurately reflect the evolving nature of molecular life sciences.

Actively involved with EMBO since he was elected as a member in 1976, Hermann was one of the early organizers of the EMBO

Symposia held from the mid-seventies until the early nineties. He served on the EMBO Council from 1989 to 1995.

To honour Hermann and his achievements, a special symposium will be held at EMBL in Heidelberg on 25 January 2010.

The symposium will be opened by a guest lecture from *Sydney Brenner*, one of the world's pioneers in genetics and molecular biology. The lecture programme will also feature *Kai Matuschewski* who will talk on his malaria research, taking a look into what may be the future for prevention of this devastating disease. The sessions will run from 3–5 pm, followed by an evening reception that will certainly be full of good cheer and discussion – much like a *studium generale* that Hermann so particularly enjoys when colleagues from the EMBO community get together.

EMBO Members and staff and others he has worked with over the past years will join Hermann as we wish him well for his future endeavours.

For registration, please contact *Kim Bell*, kim.bell@embo.org

As previously announced, *Maria Leptin* takes on the role of Director of EMBO as of January 2010. The next issue of *EMBOencounters* will feature an article from *Maria*.

EMBO Council Meeting in Heidelberg

New Chair and Secretary General elected

On 8–9 October 2009, the EMBO Council met in Heidelberg for its 67th meeting to discuss and review the organization's activities with management. The Chair of Council, *Tim Hunt*, hosted the meeting.

Tim Hunt completes his second three-year term as a member of Council at the end of 2009 and was therefore not eligible for re-election as Chair. *Carl-Henrik Heldin* was elected as Chair of the EMBO Council for 2010.

Anton Berns was elected Secretary General of EMBO for a first term of three years starting in January 2010. He subsequently stepped down as Council member and Vice-Chair of Council. *David Shore* was elected as Vice-Chair of the EMBO Council for 2010.

The EMBO membership had re-elected *Daniela Rhodes* and *Ari Helenius* as Council

Members for the period 2010–2012 and *Pascale Cossart* was newly elected for the same period. Also co-opted to serve on Council for the period 2010–2012 were *Leszek Kaczmarek* and *Detlef Weigel*. *Richard Treisman* was co-opted to replace *Maria Leptin* for the remaining two years of her term since she has stepped down as Council member prior to taking up the position of EMBO Director from January 2010. Also co-opted was *Veronica van Heyningen* to replace Anton Berns for the remaining one year of his term.

The EMBO Council (as of January 2010)

- Andrea Ballabio
- Maria Blasco
- Patrick Charnay
- Pascale Cossart
- Carl-Henrik Heldin (Chair)
- Ari Helenius
- Leszek Kaczmarek
- Daniel Louvard
- Ferenc Nagy
- Daniela Rhodes
- Benny Shilo
- David Shore (Vice-Chair)
- Richard Treisman
- Detlef Weigel
- Veronica van Heyningen

European Molecular
Biology Organization

NEW!



**India
China
Taiwan
Africa**

**EMBO
Global Exchange
supporting scientific
progress worldwide**

Lecture Course
Deadline
1 February 2010

S. Krahl | EMBO

EMBO goes global

Supporting science in India, China, Taiwan and Africa

European science does not have high visibility in countries such as India, China or Taiwan. Few scientists from these countries have worked in the EU, and only a few connections have been established. Their links and interaction with the scientific community in the US have traditionally been much stronger.

The same is true for Africa. Even though African science has transformed itself over the past years and the research infrastructure has improved, the geographic boundaries have not become any easier to overcome. With its fragmented landscape of different nations, cultures and languages, Europe does not appear to be such an easy partner to deal with either. So large European meetings and conferences still mostly rely on participants from neighbouring countries.

EMBO is committed to speeding up the exchange of knowledge and establishing long-lasting scientific ties worldwide. The organization has now launched a new initiative that extends its commitment to the whole of Africa, China, India and Taiwan. EMBO Global Exchange gives scientists from these countries access to funding, networking and the latest research information. Similarly, it will create opportunities to attract some top-level researchers from these countries to Europe.

Some EMBO activities, such as fellowships, are already available worldwide. The first phase of the new programme offers a range of additional benefits:

◀ **Online promotion since October 2009 has already generated much interest in EMBO Global Exchange**

EMBO Global Exchange

Lecture Courses:

selected local scientists, resident in target countries (India, China, Taiwan and Africa) pair up with European scientists to organize lecture courses. Around 30–40 local students would be likely to participate in each lecture course.

EMBO Global Exchange

Lectures Series:

EMBO Members and Young Investigators may travel to local institutes within one of the four areas to present the latest research from their fields of expertise.

EMBO Global Exchange

European Lecture Series:

leading scientists from the focus countries will be invited to travel around Europe to present their research at top institutes.

EMBO will help India and China to recruit back scientists from these countries who received their education in Europe. Our programme will provide a platform to inform them about grants, opportunities and new perspectives of setting up a lab back home.

A new committee selected from the EMBO membership will guide and evaluate applications for the lecture courses and series that form the new programme. And in future years, we might see more of the EMBO Associate Members coming from the new target countries.

For more information please go to:
www.embo.org/programmes/global-exchange.html

600 female biologists join expert network

Women in Life Sciences database



Four years after its launch, the online Women in Life Sciences (WILS) database has grown to include 600 female experts, covering nearly all fields of molecular biology. Its aim is to promote qualified women as candidates for professorships, advisory groups, speakers at conferences or manuscript reviewers, according to database coordinator *Karla Neugebauer*, group leader at the Max Planck Institute of

Molecular Cell Biology and Genetics in Dresden, Germany. The database was initiated by the European Life Scientist Organization (ELSO) and is supported by EMBO and the Federation of European Biochemical Societies (FEBS).

Each listed person has a page of biographical and contact information. To be accepted, the candidate must be an expert in the field, based in Europe or a European national, and have published within the past three years a basic research article as first or last author. Users can search the database by keywords, cities, institutions, research area or country.

Neugebauer also sees the WILS database as a networking tool for women, allowing them to get in touch and support each other in their professional development. The goal is to facilitate the search for expert female scientists. With men holding most of the key positions in science, the database initiators expect them to be frequent users of the database.

Female researchers can sign up online, and users can search the database by going to **http://wils-database.embo.org/members_meet.php**

Mobile postdocs save for the future

Pension plan for EMBO Fellows

For scientists, an extensive travel itinerary often proves a decisive career advantage and a major prerequisite in the competition for funds. Early stage scientists rarely remain in one country for more than four or five years – and then they see themselves leaving behind another emptied apartment, carrying suitcases and moving boxes, on the move to the next big city, next place, next lab. But country hopping has its downsides, too. They range from making sacrifices in social life, to loosening the bonds with relatives and repeatedly confronting children and partners with new environments, languages and cultures.

Another big disadvantage of mobility is delaying saving for retirement. “Most scientists looking for an interesting postdoctoral position do not worry about their pension – until it is too late,” wrote *Frank Gannon* in an editorial of *EMBO reports* (Gannon 2007). To tackle this issue, EMBO has recently announced the introduction of an internationally portable pension plan for the more than 400 recipients of EMBO Long-Term Fellowships. The plan offers a benefit package that optimally suits the needs of highly mobile scientists.

“When I moved from France to Cambridge, UK, I decided to invest into the pension scheme offered in my institute, because I will probably lose the contributions I made to the French pension scheme,” said *Anne Bertolotti*, tenure-track group leader at the Medical Research Council (MRC) in Cambridge since 2006 and member of the EMBO Young Investigators network. “I currently make additional contributions to the MRC pension scheme in order to buy the extra years that would entitle me to full retirement benefits in the UK.” But what if she changes job again before she

retires? “Mobility makes it possible to find job opportunities everywhere, but retirement is really a problem for us,” admits Anne.

The Hungarian scientist *Tibor Harkany* draws the same conclusions. “There is a different type of pension scheme in every country,” said the well-travelled biologist, who after obtaining his PhD in Hungary moved to the Netherlands, then changed to Sweden and now coordinates two labs, one in Sweden and one in the UK. Like many other scientists, Tibor was around 35 when he started paying into a state system in the UK – a late start for retirement savings. “I had to deal with my pensions myself and separately for each country. It will be an excellent bonus if EMBO coordinates and secures the pension plan for scientists changing countries,” said Tibor.

This is the first time that a European science organization has established a pension plan for its fellows. The scheme addresses all new and second-year EMBO Fellows. Under the plan, which starts January 2010, fellows will receive a monthly match from EMBO of up to 100 euro for the funds they contribute. The plan is currently set up with a conservative portfolio of investments, including guaranteed interest plus additional interest based on market values. In addition to up to 100 euro matching incentive,

participants in the pension plan benefit from attractive group conditions, flexible payment and repayment terms and worldwide validity of acquired benefits. Participation in the pension plan is voluntary and scientists may continue paying into the scheme after they complete their fellowship.

MLP, a Heidelberg based independent financial services and wealth management consulting company, has developed and will administer the plan. The funds will be managed by Allianz, one of the highest-rated insurers worldwide.

Reference

Frank Gannon (2007) The downsides of mobility. *EMBO rep* 8: 201

Bi-annual application deadlines



EMBO Fellowships



Hoarding for seasons ahead

Deadline for early registration & abstract submission



EMBO EVENTS 2010 (partial list: January – August 2010)

PRACTICAL COURSES

- **Phosphoproteomics**
DK – Odense, 1–5 February
- **Genomic approaches to evolution and development**
DE – Heidelberg, 7–11 February
- **Mass spectrometry in protein analysis and characterization**
UY – Montevideo, 16–26 March
- **Advanced optical microscopy**
UK – Plymouth, 8–17 April
- **In silico systems biology: network reconstruction, analysis and network based modelling**
UK – Hinxton, 10–13 April
- **Methods for miRNA discovery and analysis: From in situ hybridization to new generation sequencing**
IT – Monterotondo Scalo, 10–16 April
- **Computational RNA Biology**
FR – Cargese, 26 April–1 May
- **Computational molecular evolution**
GR – Heraklion (Crete), 3–12 May
- **Scientific programming and data visualization for structural biology**
DE – Heidelberg, 5–7 May
- **Lipid rafts: methods for studying membrane organization**
DE – Dresden, 16–24 May
- **Structural characterization of macromolecular complexes**
FR – Grenoble, 31 May–5 June
- **Microscopy: From genome scale to the single molecule**
ZA – Pretoria, 31 May–12 June
- **The DT40 cell line as a model vertebrate genetic system**
IE – Galway, 14–19 June
- **Electron microscopy and stereology in cell biology**
NO – Oslo, 17–27 June
- **Application of transient kinetic methods to biological macromolecules**
UK – Canterbury, 27 June–3 July
- **Biomolecular simulation**
FR – Paris, 28 June–4 July
- **High-throughput RNAi and data analysis**
DE – Heidelberg, 28 June–2 July
- **3D developmental imaging**
PT – Oeiras, 1–9 July
- **Single-molecule manipulation and analysis of DNA–protein interactions**
FR – Paris, 4–18 July
- **Molecular approaches to evolution and development**
SE – Fiskebackskil, 12–23 July
- **Animal models for physiology and disease**
UK – Sheffield, 19–30 July
- **Multi-level modelling of morphogenesis**
UK – Norwich, 19–30 July
- **Ubiquitin and SUMO**
HR – Split, 29 July–4 August
- **Multidimensional NMR in structural biology**
IT – Castelveccchio Pascoli (Lucca), 1–6 August
- **Post-translational modifications of proteins: from discovery to functional analysis**
SE – Uppsala, 22–4 August

- **Viral vectors in gene therapy: applications and novel production methods**
FI – Kuopio, 26 August–4 September
- **Cryo-electron microscopy and 3-D image analysis**
DE – Heidelberg, 29 August–5 September
- **Protein expression, purification and crystallization (PEPC-7)**
DE – Hamburg, 31 August–8 September

WORKSHOPS

- **Protein and lipid function in secretion and endocytosis**
AT – Goldegg am See, 12–17 January
- **Visualizing Biological Data (VizBi)**
DE – Heidelberg, 3–5 March
- **Hedgehog signaling: From developmental biology to anti-cancer drugs**
FR – St. Jean Cap Ferrat, 27–31 March
- **Proteolysis and neurodegeneration (5th INPROTEOLYS Meeting)**
ES – Madrid, 4–7 May
- **2010 EMBO MOLECULAR MEDICINE WORKSHOP: Cell guidance signals in cancer**
IT – Portofino Vetta (Camogli), 6–9 May
- **RNA quality control**
AT – Vienna, 10–13 May
- **Tumour suppressors ES–LHospitalet de Llobregat (Barcelona), 10–11 May**
- **Advanced light microscopy techniques and their applications 10th International ELMI Meeting**
DE – Heidelberg, 18–21 May
- **Emerging themes in infection biology**
FR – Nice, 1–4 June
- **Genomic approaches to interactions between plant viruses, their hosts and their vectors**
IT – Fenestrelle, 12–16 June
- **Development and stem cells in the pancreas**
SE – Stockholm, 14–16 June
- **Viruses and innate immunity**
IE – Dublin, 16–18 June
- **Chromosome segregation and aneuploidy**
UK – Edinburgh, 19–23 June
- **Development of cortical networks and neurological disorders**
NL – Amsterdam, 30 June–2 July
- **Systems biology of development**
CH – Ascona, 16–19 August

CONFERENCE SERIES

- **Catalytic mechanisms by biological systems: At the interface between chemistry and biology**
DE – Hamburg, 5–7 May
- **Microtubules: Structure, regulation and functions**
DE – Heidelberg, 2–5 June
- **C. elegans development and gene expression**
DE – Heidelberg, 17–20 June
- **Gene transcription in yeast: From mechanisms to functional genomics**
ES – Sant Feliu de Guixols, 19–24 June

CONFERENCE SERIES *second in a series*

- **Cellular signaling and molecular medicine**
HR – Cavtat (Dubrovnik), 21–26 May

- **Replication/repair and segregation of chromosomes**
DE – Munzingen (Freiburg), 13–17 June

CONFERENCE SERIES *third in a series*

- **Recombination and connections to SUMO and ubiquitin modifications**
IT – Castelveccchio Pascoli (Lucca), 17–21 May
- **The molecular and developmental biology of Drosophila**
GR – Kolybari, 20–26 June

LECTURE COURSE (WORLD)

- **Virus–host: Partners in pathogenicity**
CR – San Jose, 23–26 February

ESF/EMBO SYMPOSIA

- **B cells and protection: Back to basics**
ES – Sant Feliu de Guixols, 18–23 April
- **Antiviral applications of RNA interference**
ES – Sant Feliu de Guixols, 30 May–4 June

EMBO/FEBS LECTURE COURSES

- **The cytoskeleton in development and pathology**
SE – Djurhamn, 19–24 June
- **Host–microbes interactions**
GR – Spetses, 31 August–10 September

EMBO | EMBL SYMPOSIA

- **Human variation: Cause and consequence**
DE – Heidelberg, 20–23 June

EMBO LABORATORY

MANAGEMENT COURSES

- **open to all independent group leaders**
 - **DE–Leimen** (near Heidelberg)
16–19 March
 - **DE–Leimen** (near Heidelberg)
12–15 October
 - **UK–Ware** (Hertfordshire)
2–5 November
- **for postdocs**
 - **UK–Ware** (Hertfordshire)
24–26 March
 - **DE–Leimen** (near Heidelberg)
14–16 June
 - **DE–Leimen** (near Heidelberg)
5–7 October

OTHER EMBO EVENTS

- **EMBO Young Investigators Meeting**
DE – Heidelberg, 10–12 May
- **EMBO Fellows Meeting**
DE – Heidelberg, 17–20 June

For more information and a list of all courses, workshops and conferences (January – December 2010) please go to: www.embo.org/events/calendar.html

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



EMBO Courses & Workshops

World-class science in new conference venue

EMBO|EMBL Symposia set to take off in 2010

Due for completion early next year, the Advanced Training Centre (ATC) on the EMBL Heidelberg campus will set the scene for a new era of scientific meetings in Europe. The centre will hold conferences and workshops for scientists at all career stages. To help establish the ATC as a major conference venue in Europe, EMBO and EMBL will jointly bring a series of high-class symposia to the ATC.

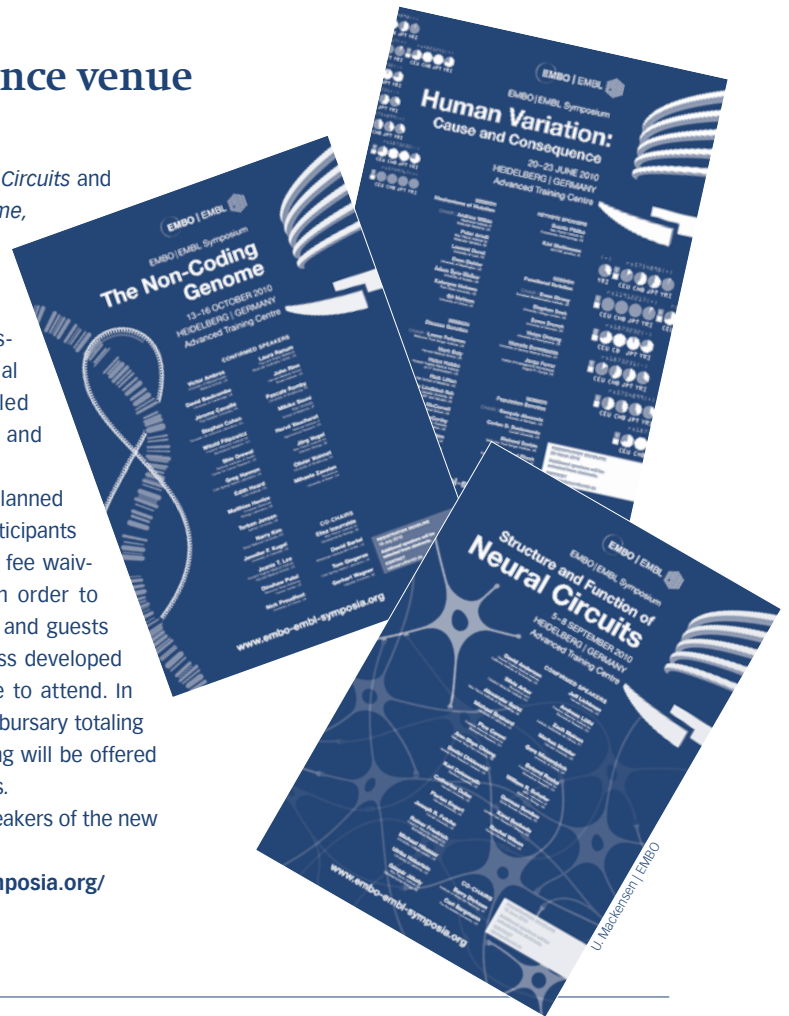
The new symposia series will highlight future directions in life sciences. Rather than concentrating on specific, isolated scientific phenomena, the meetings will deliver the big picture of cutting-edge research in fields such as neurobiology or systems biology. In a top-down approach, the committee including eight scientists from both organizations determines the topics and the chair and the co-chairs for each meeting. These in turn decide on the list of speakers and scientific sessions for each meeting. The inaugural meeting titled *Human Variation: Cause and Consequence* will take place in June 2010, followed by symposia in September and October 2010 on *Structure*

and Function of Neural Circuits and *The Non-Coding Genome*, respectively. From 2011 onwards, five meetings per year are scheduled. The logistics and the operational part are being handled by the EMBL Courses and Conferences Office.

The symposia are planned to attract 300–400 participants per event. Registration fee waivers will be available in order to allow young scientists and guests from countries with less developed research infrastructure to attend. In addition, a travel grant bursary totaling 10,000 euro per meeting will be offered to successful applicants.

For titles, dates and speakers of the new symposia go to:

www.embo-embl-symposia.org/about/index.php



EMBO Poster Prize competition

Recognizing young researchers



Congratulations to the following winners of the competitions held at recent EMBO-sponsored events:

→ Ester Falconer

BC Cancer Research Centre, Canada

Asymmetric segregation of defined DNA template strands in mitotic cells *in vivo*.

Presented at the EMBO Conference Series (2nd in a series), *Nuclear structure and dynamics*, FR–Isle sur la Sorgue, 30 September–4 October 2009.

→ Arnon Henn

Yale University, USA

Pathway of ATP utilization and duplex rRNA unwinding by the DEAD box protein, DbpA.

Presented at the EMBO Conference Series, *Helicase and NTP-driven nucleic acids motors: structure, function, mechanism and roles in human disease*, CH–Les Diablerets, 27 June–2 July 2009.

→ Peter Jönsson

Chalmers University of Technology, Sweden

Analyzing diffusive and convective behavior in lipid bilayers using photobleaching.

Presented at the ESF/EMBO Symposium, *Biological surfaces and interfaces*, ES–Sant Feliu de Guixols, 28 June–3 July 2009.

→ Bruno P. Klaholz

IGBMC, France

Architecture of the full RXR/VDR DNA complex revealed by high-resolution cryo electron microscopy.

Presented at the EMBO Conference Series (2nd in a series), *Nuclear receptors: from molecular mechanisms to molecular medicine*, HR–Dubrovnik, 25–29 September 2009.

→ Gerd Krapf

Austria

ETV6/RUNX1 interferes with MAD2L1 activation and attenuates spindle checkpoint control.

Presented at the EMBO Workshop, *RUNX transcription factors in development and disease*, UK–Oxford, 16–19 August 2009.

→ Satoru Mochida

Cancer Research UK

Regulated activity of PP2A-B55Δ is crucial for controlling entry into and exit from mitosis in *Xenopus* egg extracts.

Presented at the EMBO Conference Series (2nd in a series), *Europhosphatases 2009: protein phosphatases in development and disease*, NL–Egmond aan Zee, 14–18 July 2009.

→ Jorge Pérez-Fernandez

CNRS, France

'When the trees show the forest': correlation between quantitative ChIP and Miller spread of rDNA.

Presented at the EMBO Conference Series, *8th International Conference on ribosome synthesis*, DE–Regensburg, 26–30 August 2009.

→ Heidi Olzscha

Max Planck Institute of Biochemistry, Germany

Cytotoxicity of de novo amyloid proteins in eukaryotic and prokaryotic cells.

Presented at the EMBO Conference Series (2nd in a series), *Cellular protein homeostasis in disease and ageing*, HR–Dubrovnik, 23–28 May 2009.

→ Lakshmi Srinivasan

Harvard Medical School, USA

PI3 Kinase signaling is responsible for BCR mediated mature B cell survival.

Presented at the EMBO Conference Series (2nd in a series), *Antigen receptor signaling: from lymphocyte development to effector function*, IT–Certosa di Pontignano, 12–16 September 2009.

→ Stanislav Vasilyev

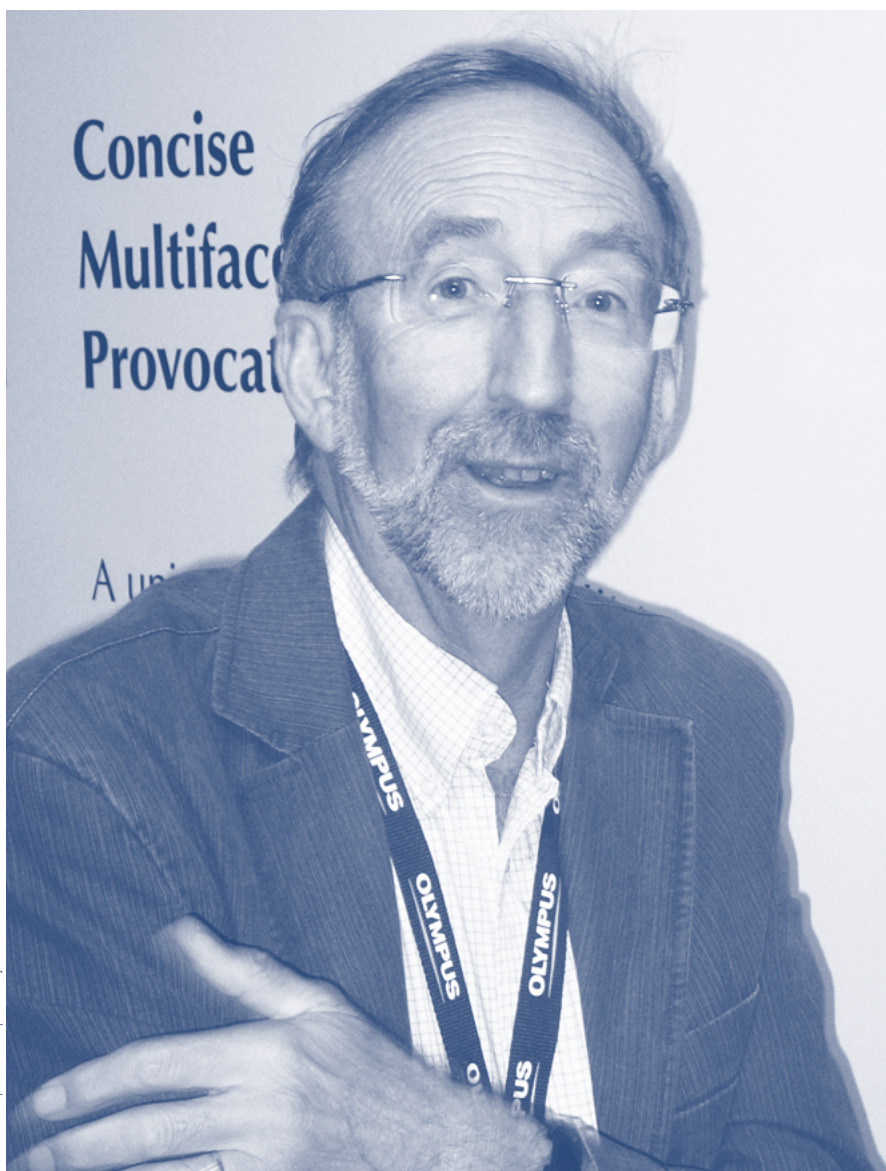
Scientific Research Institute of Medical Genetics, Russia

Aneugenic effect of plutonium-239 in somatic cells of nuclear-chemical plant workers.

Presented at the ESF/EMBO Symposium, *Spatio-temporal radiation biology: transdisciplinary advances for biomedical applications*, ES–Sant Feliu de Guixols, 16–21 May 2009.

Pastures new for Les Grivell

Former head of EMBO Scientific Publication retires



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◀ Les Grivell representing EMBO publications at The EMBO Meeting 2009 in Amsterdam, his hometown

He was the heart and soul behind a number of EMBO's social events and one of the key players in the formation of the organization as we know it today. In mid-November, after nine years service, *Les Grivell* left EMBO and his role as Head of Scientific Publication for the canals and green pastures of Holland. "I will probably spend a lot of time hiking – a great passion of mine," says the sporty man who hiked up the steep hill to the EMBO building every day come rain or shine.

Issuing breaking news in fake press releases, organizing song contests and treasure hunts – Les had some creative ideas about how to entertain his colleagues. His team spirit and coordination skills were in no less demand on the job. As head of Electronic

Information in his first years at EMBO, Les was responsible for *E-BioSci*, a project aimed at better integration of the scientific literature with its associated data. "The project immediately caught my imagination," remembers the former chair of molecular biology at the University of Amsterdam and EMBO Member. He spent almost five years with *E-BioSci* – until in 2005 the EMBO Council decided that the project would be better spun off and taken forward by other organizations.

When Les joined EMBO in 2000, its staff were still spread throughout the EMBL, while containers outside housed the editorial teams of *The EMBO Journal* and *EMBO reports*. Everything changed when the new building was finished and formally opened in 2001.

In the run-up to the launch of a third journal, *Molecular Systems Biology*, it became clear that the expanding team needed someone to overview its activities and manage the dialogue with the publishers – a perfect role for Les, the accomplished coordinator and experienced scientist. "The job was extremely interesting, but I soon realized what I was up against," he recalls. "Scientific publishing is as competitive as football league."

Every weekend, he travelled to his family living in his second hometown Amsterdam – and back to Heidelberg. During the long hours on the train he used to "read, write and think". Now, after his retirement, he'll be finally able to devote more time to music and his outdoor interests, preferably in or as close as possible to hills and mountains. Recalling an epic ski tour from Chamonix to Zermatt, he admits that he is happy skiing on any kind of snow. "This is what comes from growing up in England and learning to ski in the Netherlands," he laughs. His colleagues will miss him dearly. "Les always inspired us with his warmth, endless energy and commitment," says one of his coworkers. "He is a walking *Encyclopedia Britannica*," adds another.

In honour of Les' contributions and his great team spirit, the EMBO team held a dinner on 18 November. The internal selection process to find the next retreat organizer is still in progress!

EMBO welcomes 66 leading life scientists as members

New Members elected in 2009

Sixty-six life scientists from Europe and around the world were elected to EMBO ranks this year. Sixty of the researchers are based in Europe and neighbouring countries, while six scientists from Australia, Japan and the US

receive the honour of associate membership. In total, EMBO membership now comprises 1,420 molecular biologists.

The scientists come from 16 different countries and represent a broad cross-section

of researchers from all fields of molecular biology, ranging from evolutionary to computational biology, neuroscience and plant science. This year, 15 female scientists are recognized for their contributions to life science research.

■ **Frédéric Allain** CH
Swiss Federal Institute of Technology,
Zurich

■ **Gil Ast** IL
Tel Aviv University

■ **Francis Barr** UK
University of Liverpool

■ **Yann Barrandon**
Swiss Federal Institute of Technology,
Lausanne

■ **Françoise Barré-Sinoussi** FR
Pasteur Institute, Paris

■ **Facundo Batista** UK
Cancer Research UK, London

■ **Simon Boulton** UK
Cancer Research UK, South Mimms, Herts

■ **Søren Brunak** DK
Technical University of Denmark,
Kongens Lyngby

■ **Julia Promisel Cooper** UK
Cancer Research UK, London

■ **Patrick Cramer** DE
Ludwig Maximilian University, Munich

■ **Geneviève de Saint Basile** FR
French National Institute for Health and
Medical Research, Paris

■ **Liam Dolan** UK
University of Oxford

■ **Richard Durbin** UK
Wellcome Trust Sanger Institute Cambridge

■ **Martin Embley** UK
Newcastle University

■ **Tariq Enver** UK
Oxford Radcliffe Hospitals, NHS Trust

■ **Elizabeth Fisher** UK
MRC Centre for Neuromuscular Diseases,
London

■ **Jonathan Flint** UK
University of Oxford

■ **Margaret Frame** UK
Western General Hospital, Edinburgh

■ **Marcos González-Gaitán** CH
University of Geneva

■ **Iain Hagan** UK
University of Manchester

■ **Nicholas P. Harberd** UK
University of Oxford

■ **Bassem Hassan** BE
VIB Leuven

■ **Ronald Hay** UK
University of Dundee

■ **Liisa Holm** FI
University of Helsinki

■ **Brigitte Kieffer** FR
Institute of Genetics and Molecular and
Cellular Biology, Illkirch

■ **Thomas Lecuit** FR
Developmental Biology Institute of
Marseilles–Luminy

■ **Ben Luisi** UK
University of Cambridge

■ **Vivek Malhotra** ES
Centre for Genomic Regulation, Barcelona

■ **Richard Marais** UK
Institute of Cancer Research, London

■ **Oscar Marín** ES
Institute of Neuroscience, Alicante

■ **Seamus Martin** IE
University of Dublin

■ **Jane Mellor** UK
University of Oxford

■ **Axel Meyer** DE
University of Konstanz

■ **Victor Muñoz** ES
Centre of Biological Research, Madrid

■ **Andrea Musacchio** IT
European Institute of Oncology, Milano

■ **James H. Naismith** UK
University of St Andrews

■ **Anne O'Garra** UK
MRC National Institute for Medical Research,
London

■ **Stephen O'Rahilly** UK
University of Cambridge

■ **Roger Patient**
University of Oxford

■ **David Porteous**
Western General Hospital, Edinburgh

■ **Catherine Rabouille**
University Medical Center, Utrecht

■ **Minoo Rassoulzadegan**
Nice Sophia Antipolis University

■ **Jean-Marc Reichhart** FR
Institute for Molecular and Cell Biology,
Strasbourg

■ **William Schafer** UK
MRC Laboratory of Molecular Biology,
Cambridge

■ **Dirk Schübeler** CH
Friedrich Miescher Institute for
Biomedical Research, Basel

■ **Stephen Smerdon** UK
MRC National Institute for Medical Research,
London

■ **Christopher Smith** UK
University of Cambridge

■ **Anne Spang** CH
University of Basel

■ **Ernst H.K. Stelzer** DE
European Molecular Biology Laboratory,
Heidelberg

■ **Michael Stratton** UK
Wellcome Trust Sanger Institute,
Cambridge

■ **Nektarios Tavernarakis** GR
Foundation for Research & Technology,
Heraklion

■ **Dan S. Tawfik** IL
Weizmann Institute of Science,
Rehovot

■ **Didier Trono** CH
Swiss Federal Institute of Technology,
Lausanne

■ **Gisou Van der Goot** CH
Swiss Federal Institute of Technology,
Lausanne

■ **Pierre Vanderhaeghen** BE
Institute of Interdisciplinary Research in
Human and Molecular Biology,
Brussels

■ **Laura van't Veer** NL
The Netherlands Cancer Institute,
Amsterdam

■ **Dietmar Vestweber** DE
Max Planck Institute for Molecular Biomedicine,
Münster

■ **Andrew Paul Waters** UK
University of Glasgow

■ **Robert J. White** UK
The Beatson Institute for Cancer Research,
Glasgow

■ **Marat Yusupov** FR
Institute of Genetics and Molecular and
Cellular Biology, Illkirch

New EMBO Associate Members

■ **Bruce Beutler** US
The Scripps Research Institute, La Jolla

■ **Uta Francke** US
Stanford University

■ **Fred Gage** US
Salk Institute, La Jolla

■ **Keiichi Namba** JP
Osaka University

■ **Andreas Strasser** AU
Walter and Eliza Hall Institute of
Medical Research, Melbourne

■ **Masatoshi Takeichi** JP
RIKEN Center for Developmental Biology,
Kobe

EDITOR PICKS – EMBO PUBLICATIONS

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



research articles
A loop-to-base processing mechanism underlies the biogenesis of plant microRNAs miR319 and miR159

Bologna NG, Mateos JL, Bresso EG, Palatnik JF

EMBO J (AOP 8 October 2009)

doi:10.1038/emboj.2009.292

Curved FtsZ protofilaments generate bending forces on liposome membranes

Osawa M, Anderson DE, Erickson HE

EMBO J (AOP 24 September 2009)

doi:10.1038/emboj.2009.277

Human RAP1 inhibits non-homologous end joining at telomeres

Sarthy J, Bae NS, Scrafford J, Baumann P

EMBO J (AOP 17 September 2009)

doi:10.1038/emboj.2009.275

Myc-regulated microRNAs attenuate embryonic stem cell differentiation

Lin C-H, Jackson AL, Guo J, Linsley PS, Eisenman RN

EMBO J (AOP 10 September 2009)

doi:10.1038/emboj.2009.254

Thymus-specific deletion of insulin induces autoimmune diabetes

Fan Y, Rudert WA, Grupillo M, He J, Sisino G, Trucco M

EMBO J (AOP 13 August 2009)

doi:10.1038/emboj.2009.212



research articles
Structural basis for recruitment of BRCA2 by PALB2

Oliver AW, Swift S, Lord CJ, Ashworth A, Pearl LH

EMBO rep **10**: 990–996

VDAC2 is required for truncated BID-induced mitochondrial apoptosis by recruiting BAK to the mitochondria

Sinha Roy S, Ehrlich AM, Craigen WJ, Hajnóczky G

EMBO rep **10**: 1341–1347

reviews
A matter of choice: the establishment of sister chromatid cohesion

Uhlmann F

EMBO rep **10**: 1095–1102

Towards a small animal model for hepatitis C

Ploss A, Rice CM

EMBO rep **10**: 1220–1227

science & society
Logophobia

Pigliucci M

EMBO rep **10**: 1068

Kitchen biology

Wolinsky H

The rise of do-it-yourself biology democratizes science, but is it dangerous to public health and the environment?

EMBO rep **10**: 683–685



research articles
Edgetic perturbation models of human inherited disorders

Zhong Q, Simonis N, Li QR, Charlotheaux B, Heuze F, Klitgord N, Tam S, Yu H,

Venkatesan K, Mou D, Swearingen V,

Yildirim MA, Yan H, Dricot A, Szeto D,

Lin C, Hao T, Fan C, Milstein S, Dupuy D,

Brasseur R, Hill DE, Cusick ME, Vidal M

Mol Syst Biol **5**: 321

Harnessing gene expression to identify the genetic basis of drug resistance

Chen BJ, Causton HC, Mancenido D,

Goddard NL, Perlstein EO, Pe'er D

Mol Syst Biol **5**: 310

Listening to the noise: random fluctuations reveal gene network parameters

Munsky B, Trinh B, Khammash M

Mol Syst Biol **5**: 318

Application of an integrated physical and functional screening approach to identify inhibitors of the Wnt pathway

Miller BW, Lau G, Grouios C, Mollica E,

Barrios-Rodiles M, Liu Y, Datti A, Morris Q,

Wrana JL, Attisano L

Mol Syst Biol **5**: 315

editorial
Systems biology and the virtual physiological human

Kohl P, Noble D

Mol Syst Biol **5**: 292

news & views
A systems biology tour de force for a near minimal bacterium

Glass J, Hutchison C, Smith H, Venter JC

Mol Syst Biol **5**: 333

review
Strategies for cellular decision-making

Perkins T, Swain P

Mol Syst Biol **5**: 326



Image submission
deadline for
The EMBO Journal
Cover Contest 2010

The EMBO Journal Cover Contest 2010

It's that time of year again when the editors of *The EMBO Journal* invite submissions for the contest to find the best journal covers for 2010. Apart from prizes for the top-scoring scientific and non-scientific images, many of the submitted pictures will have a chance of being published on the front cover of the journal during the year. Check out the guidelines and see some of the award-winning covers from the past two years at:

<http://covercontest.embo.org>

The deadline for submissions is 15 January 2010.



EDITOR PICKS

EMBO Molecular Medicine

in focus

Molecular mechanisms of aging-related neurodegenerative diseases: emerging views from genome-wide screens in yeast, worms, and flies

van Ham TJ, Breitling R, Swertz M, Nollen K

EMBO Mol Med 1(8–9)

doi 10.1002/emmm200900051

research articles

Molecular aging and rejuvenation of human muscle stem cells

Carlson M, Suetta C, Conboy M, Aagaard P, Mackey A, Kjaer M, Conboy

EMBO Mol Med 1(8–9)

doi 10.1002/emmm 2009 00045

Modulation of mitochondrial protein phosphorylation by soluble adenylyl cyclase ameliorates cytochrome oxidase defects

Acin-Perez R, Salazar E, Brosel S, Yang H, Schon A, Manfredi G

EMBO Mol Med 1(8–9)

doi 10.1002/emmm 2009 00046

Free access in
2009 & 2010

www.embomolmed.org

Faster results

Website revamp for EMBO reports

October 2009 saw the launch of the new *EMBO reports* website. Senior editor, *Howy Jacobs*, explained that the new site is “clean and gets easily to the point of things”. Combining improved functionality with the journal’s clas-

sic design elements, www.emboreports.org now offers readers an online experience true to the high quality feel of the printed copy. The editors warmly invite you to take a look around. ▼

The screenshot shows the EMBO reports website homepage. At the top, there's a navigation bar with links for REGISTER, MY ACCOUNT, EMBO, SUBSCRIBE, and E-ALERTS. The main header features the EMBO reports logo and a welcome message. Below the header, there are several sections: a search bar, a list of featured articles (including 'Working for the Clampdown' and 'Big Science, Little Science'), and a 'latest news' section. On the right side, there are 'JOURNAL SERVICES' and 'EMBO RESOURCES' sections. The bottom of the page includes a 'CUSTOMER SERVICE' section and a 'neuropod' advertisement.

the
EMBO
meeting

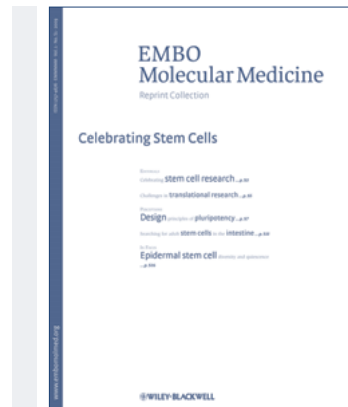
2011
VIENNA
10-13 September

Propose your
workshop by
1 March 2010

EMBO

EMBO publications special issues

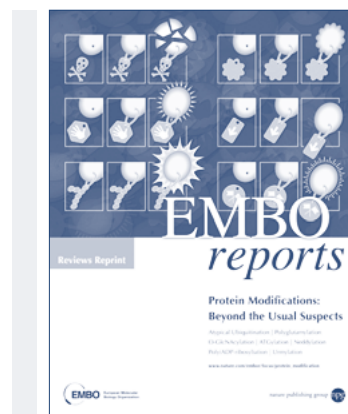
Homage to stem cell research



Celebrating Stem Cells

EMBO Molecular Medicine complemented the plenary lectures at *The EMBO Meeting* in Amsterdam with its special issue *Celebrating Stem Cells*. The editors invited the symposium speakers to write about their experiences and ideas in their subject(s) of interest (*Clevers, 2009; Smith, 2009; Watt & Jensen, 2009*). Their articles were accompanied by a reflection by *Giulio Cossu*, one of the Senior Editors, on the challenges the community is facing (*Cossu, 2009*). This special issue is now available online, along with two other issues on cancer and neurodegeneration. They are continuously updated and highlight the timely articles on each topic.

Enjoy the reading at www.embomolmed.org



Protein Modifications: Beyond the Usual Suspects

Authored by leading researchers, this *EMBO reports* special series of comprehensive and engaging reviews highlights the immense complexity of post-translational protein modifications. The papers offer expert coverage of this challenging and diverse topic using language accessible to both specialist and non-specialist readers alike. To read the articles go to: www.nature.com/embor/focus

The middle and the end

The 2009 *EMBO Journal* review series *The Middle & The End* focuses on different facets of centromere and telomere biology. Nine review articles summarize our current understanding of these various aspects of chromosome biology, especially in the light of recent advances, demonstrating parallels as well as differences in the function and organization of centers and ends. Texts are available at:

www.nature.com/emboj/focus/telomere



Cellular dynamics

In the last reprint collection published by *Molecular Systems Biology* and distributed at *The EMBO Meeting 2009*, the editor selected a series of studies covering a broad spectrum of topics, ranging from developmental biology to mRNA post-transcriptional regulation and immune cell function. These studies all explore how to predict quantitatively the dynamics of signaling pathways and rationally manipulate cellular states in a variety of systems, providing fundamental mechanistic insights and suggesting potential avenues for drug targeting. Open access to all articles available at:

www.nature.com/msb



Young independent researchers – tomorrow's life sciences leaders

2009 selection of EMBO Young Investigators

This year, EMBO has selected 17 life scientists to receive the support of its prestigious Young Investigator Programme. The scheme identifies some of the brightest young researchers

in Europe – providing academic, practical and financial support in the early years of their independent careers. In 2009, the programme received 123 applications. The new EMBO

Young Investigators work in nine different countries, their average age is 36 years and four of them are women.

■ **Mónica Bettencourt-Dias** PT

Centriole and cilia biogenesis
Gulbenkian Institute, Oeiras

■ **Cedric Blanpain** BE

Stem cells
Free University of Brussels

■ **Alan Carleton** CH

Migration of adult-born neurons
University of Geneva

■ **Daniel Gerlich** CH

Mechanisms of cell division
ETH Zurich

■ **Casper Hoogenraad** NL

Synaptic protein transport
Erasmus Medical Center, Rotterdam

■ **Luca Jovine** SE

Protein complexes in egg-sperm recognition
Karolinska Institute, Huddinge

■ **Adele Marston** UK

Mechanism of chromosome segregation
University of Edinburgh

■ **Sophie Martin** CH

Cell polarization
University of Lausanne

■ **Patrick Meraldi** CH

Chromosome movement during cell division
ETH Zurich

■ **M. Madan Babu** UK

Computational genomics
MRC-LMB, Cambridge

■ **Duncan Odom** UK

Control of transcription in mammals
Cancer Research UK, Cambridge

■ **Simona Polo** IT

Regulatory roles of ubiquitin
IFOM Foundation-FIRC Institute, Milan

■ **Romeo Ricci** CH

Signal transduction in the metabolic syndrome
ETH Zurich

■ **Botond Roska** CH

Neural circuit function
Friedrich Miescher Institute, Basel

■ **Gerhard Schratt** DE

microRNA function in synaptic development
University of Heidelberg

■ **Rotem Sorek** IL

Microbial genomics and transcriptomics
Weizmann Institute of Science, Rehovot

■ **Tobias Walther** DE

Lipid biology
MPI for Biochemistry, Martinsried

Scientists on the move

The Write Move Prize 2009



© R. Dahm | Madrid | Spain

The *Write Move Prize*, established by EMBO Life Sciences Mobility Portal in 2006, is awarded to scientists who made the "right move" in their career and turned it into an enjoyable story. Out

of 35 entries submitted, **Ralf Dahm** (photo), Director of Scientific Management at the Spanish National Cancer Research Centre in Madrid, was selected the winner of the 2009 Write Move Prize. *EMBOencounters* publishes Ralf's story in a shortened version.

The buzz of new beginnings

by Ralf Dahm

Some 18 months ago, I experienced a memorable little episode that illustrates how finding yourself in a foreign country can be both challenging and great fun. And how just approaching people can make all the difference.

It was my fifth day living in Spain, a Saturday. With the exception of a mattress and a suitcase full of clothes, my flat was still largely empty. So I had set out to buy the essentials

for my new home. I had chosen a large, out-of-town department store and was particularly looking forward to exploring the food section. With huge offerings of traditional Spanish ham, Rioja wines and Manchego cheeses, buying food indeed turned out to be fantastic.

But then the tricky bit began. Most food packaging had pictures of what's inside, but this was no longer true for the more mundane goods I was after. Having left my dictionary safely at home, I resorted to pantomime. I was soon the centre of attention for a small group of shop assistants.

A particular highlight came when I started to explain that I required a toilet brush. When, after a good while, they finally understood, we were crying with laughter and embraced each other in relief.

After a good five hours, I finally managed to get all I wanted. My salad was beginning to show signs of fatigue, so I decided it was time to go home. However, that was easier said than done. No way I could haul 16 crammed carrier bags to the bus stop, keep them secure during the ride and then drag them all the way to my flat. I needed a taxi. To my dismay, I found no taxi stand outside the shop and even though I waited for a good 20 minutes, not a single taxi drove past. I was exhausted.

And that's when one of those incidents occurred that sometimes happen in a foreign land. Just when you think you've had enough, you encounter a stranger so selflessly helpful that all seems all right again. In this case, the helpful stranger was a young Peruvian lady who was sitting in a car nearby, waiting for her husband. I approached her to ask if she could call me a taxi. But after a quick look at my face, my shopping cart and then my face again, she simply replied in excellent English "Where do you need to go?" I told her and she said that they would drive me home.

That evening back in my flat I reflected on moving abroad as part of a scientist's career. Studying and working abroad has always been fraught with difficulties. On top of language and cultural barriers there are administrative obstacles: courses and degrees that are not recognised or payments to pension funds that cannot be transferred. At least in Europe, these problems are increasingly being tackled, making it easier for scientists to cross borders during their careers. But the thrill of venturing abroad and the friendliness of strangers will hopefully remain, making your move all the more worthwhile.

To read all stories go to:

<http://mobility.embo.org>

Big idea, big expedition

Three years around the world: Tara Oceans hopes to unravel the secrets of sea life

150,000 km to cover, 60 port visits and 50 participating labs – these are only a few figures behind the enormous project called *Tara Oceans Expedition*. The three-year scientific adventure will study the marine ecosystems across the world’s oceans. The project is no less ambitious than Darwin’s famous Beagle voyage almost 180 years ago that systematically explored the global biodiversity of plants and animals. While Darwin tried to understand our world by looking into the past, Tara Oceans project makers hope to catch a glimpse of the future – to better judge how marine life will affect the climate in years to come. After all, drifting sea plankton comprises the biggest mass movement on the planet.

“I felt the need to address disturbing questions concerning the evolution of our planet and its future,” says EMBO Member *Eric Karsenti*, who coordinates the team of more than 100 scientists including EMBO Members *Chris Bowler* and *Jean Weissenbach*. Chris joined the team hoping to better understand the secrets of marine diatoms, single-celled plant-animal hybrids that generate around twenty percent of the oxygen we breathe. “We’d like to see how the results of our lab experiments translate in the real world,” reports Chris. On hearing about the project, he immediately contacted Eric. “This is an exceptional initiative, not only because of its sheer dimension,” says Chris. “Unlike the usual short-termed oceanographic expeditions, it will give us a detailed three-year record of the state of



© H. Lantier/Fondos Tara

the ocean.” Knowing more about the function of the diatoms and how they manage to produce so much oxygen could help fight the battle against global warming, he hopes.

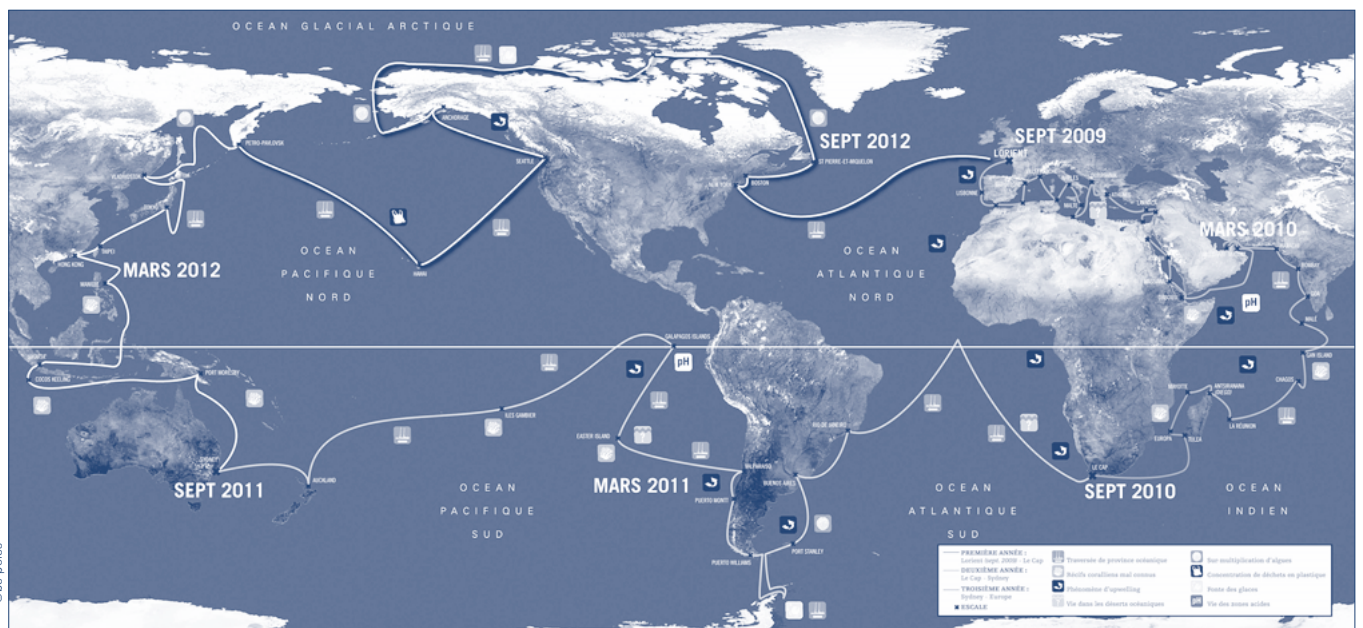
In September 2009 – after six years of preparation – the 120-ton schooner *Tara*, finally set to the oceans. Three months on, and the first images from the expedition from the jelly fish *Clytia hemisphaerica* are in the can and the big vessel suffered its first big storm off the Corsican coast. After leaving the Mediterranean Sea, the crew will head towards Egypt with its fascinating coral reefs, then the Indian Ocean and south Atlantic, passing by Patagonia and then sailing across the Pacific before heading

▲ Tara Oceans on its voyage of discovery

back along a northern route – covering a total distance that equals four times the length of the equator.

For more information about the Tara Oceans expedition and to follow the ship on her voyage, visit http://oceans.taraexpeditions.org/en/home-tara.php?id_page=1

▼ The route that Tara Oceans will follow



© be-poles

A tribute to Ephraim Katzir (Katchalski) (1916 – 2009)

EMBO founder and former President of Israel

Ephraim Katzir, the internationally renowned biochemist and biophysicist and fourth president of the State of Israel (1972–1977) passed away on 30 May 2009, just two weeks after his 93rd birthday. He died in his home near the campus of the Weizmann Institute at Rehovot, of which he was a member almost since its beginning. EMBO has much to mourn and to remember.

Ephraim Katzir (then still Katchalski) was co-founder of the European Molecular Biology Organization at the Ravello Meeting in 1963. He was instrumental in the early financing of the organization by the State of Israel. He was at the helm of steering Israel as the only (geographically) “non-European” country into the scientific community of Europe. He also supported *Uriel Z. Littauer’s* efforts that led to the acceptance of Israel as full Member of the Federation of the European Biochemical Societies (FEBS).

Ephraim was the second son of *Yehuda*, an accountant and early Zionist, and *Thila Katchalski*. His brother, *Aharon Katzir* became Israel’s most illustrious physico- and polymer chemist at his own Institute for Polymer Research at the Weizmann Institute of Science in Rehovot. To the great loss to both science and the Israeli community, Aharon was a victim of the massacre at Tel Aviv’s Lod Airport by a Japanese Red Army machine gunner gang in 1972. This murder resulted in Ephraim’s rise one year later to the fourth presidency of the State on *Golda Meir’s* motion, succeeding *Zalman Shazar*. At that time, Ephraim – like his brother – hebraicized his surname to Katzir (*harvest*).

Unlike most Jews, the Katchalskis turned east from Poland to Russia at the beginning of World War I, so that Ephraim was born at Kiev, the capital of the Ukraine. The cruel civil wars after the Soviet revolution in the border regions of Russia and the concomitant deteriorating socio-economics in Cossack-pogrom-ridden Ruthenia forced the family first to flee to Bialystok (White Russia), then, in 1922, to the homeland Palestine to join the desired Aliyah, the Zionist’s ascent. They all were emotional and rational supporters of the socialist Labor Party.

Young Ephraim graduated from Rehavia Gymnasium, Jerusalem, then enrolled at Hebrew University studying general biology, before finding his original and permanent affinities fulfilled in organic and biological chemis-

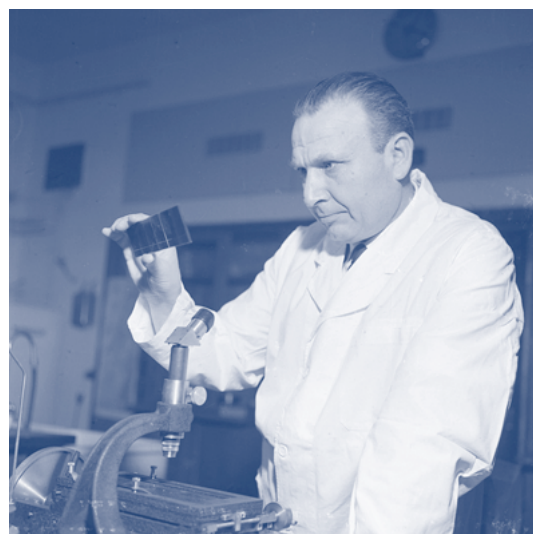
try. In 1941, he completed his doctoral thesis on simple synthetic polymers of amino acids. At the same time he and his brother joined Hemed, the Israel Army’s Science Corps, filling its explosive stores. After foundation of the state, the two brothers joined the Weizmann Institute as biophysicist and as physico-chemist, respectively. Ephraim then went on postdoc tour to the Polytechnic Institute of Brooklyn, to Columbia University and finally to Harvard University, working with *J.T. Edsall* on the thermodynamics and kinetics of mercaptalbumin formation.

Ephraim Katzir’s research centered on homo- and hetero-polymers of amino acids (Aa) and branched out from there in different directions. Thus it touched, fecundated, fortified, even first-ed, many mainstream movements in structural, functional, and molecular biology. For example: his polyPhe proved to be the product of translation with polyU as messenger, with other breakings of the genetic code following this example; his polyAa-chains demonstrated clearly and exemplarily the conformation of protein-helices; his charged polyAsp(Glu) or polyArg(Lys) expanded or contracted machine-like with changing charges; endoprotease degradable polyamino acid fibers can be used to sew internal wounds without leaving residues; mixed polymers with other biomolecules clarified the steps of the immune response, serve as synthetic (alleviating) antigens, and direct the production of specific vaccines.

Amino acids or proteins tethered to insoluble supports are the basis for biotechnologies with immobilized substrates or enzymes of various specificities. Examples are the production of enantiomeric amino acids for feed-stuffs; the synthesis of resistant penicillanic esters; the splitting of substrates *in situ*, such as making fructose sirup from saccharose. For this ingenious concept, he received the first of the highly donated and esteemed Japan prizes in 1985.

Ephraim Katzir, long before becoming first rank in the State hierarchy, promoted not only scientific or technological causes such as cooperation of teams in computer modelling of bio-macromolecules and their interactions with bioactive ligands – he was equally interested in social and educational topics.

He tried to help to solve them through a combination of synergism, advice and action. His wife *Nina*, an English teacher, his son *Meir*



© Weizmann Institute

and his three grand children attentively supported him in this respect. *Nina* died in 1986.

During his five years in State office, the modest and even somewhat shy man fulfilled his role impressively with his adaptive attitude, his Socratic philosophy and his genuine Jewish humour always good for a fitting anecdote. Not long after becoming its symbolic head, he had to lead his nation through the Yom Kippur War in which the attacking Syrian and Egyptian forces were finally repelled. He had to accept the demission of *Golda Meir*. However, almost exactly four years later, he could officially welcome in Jerusalem *Anwar el-Sadat*, the President of Egypt, on a peace-sealing state visit.

After his service as Israel’s President, Ephraim Katzir returned to research at the Weizmann Institute at a higher managerial level. All in all, he published several hundred scientific papers, articles and book chapters, served as editor and advisor to many journals and received *Festschriften* at every decade after his 60th birthday, on top of the many awards (*Rothschild*, *Israel*, *Linderstöm-Lang*, *Hans Krebs* etc), honorary degrees (*Harvard*, *McGill*, *Oxford*, *Technion*, to name only a few), and memberships (*National Academy of Science*, *Royal Society*, *Académie Française* and many more).

He remained sober, well-balanced and looked at himself and his milieu with critical humour. He knew not only the prices but also the worth – and we remember him this way.

Prof. Dr. Lothar Jaenicke

Institute of Biochemistry | University of Cologne

Author of the book *Profil der Biochemie*:

44 Porträts aus der deutschen Geschichte

(Profiles of Biochemistry: 44 portraits from German history)

For the love of science

Basic Books in Science help students and teachers in the developing world

Growing up in the province of Bandundu in the Democratic Republic of Congo doesn't exactly help fulfill the dream of a scientific career: around 50 percent of the children don't go to school, and many classrooms have nothing but rudimentary blackboards and rough pieces of wood or stone to sit on. *Djo*, now 18 years old, has managed to turn the corner after all – thanks to his persistence and the initiative called *Basic Books in Science*. The French-speaking boy even learnt English to use the texts. Today, he is a proud student at the medical school at the University of Kinshasa.

"This is just one little story, but it shows that by developing some basic infrastructure things may start changing," says *Jan Visser*, EMBO Fellow and project facilitator. The online series *Basic Books in Science: Science as a Creative Adventure of the Mind* addresses, among others, secondary-school teachers and students in developing countries, who have no access to quality science books. Currently, six volumes in maths, chemistry and physics are freely available online. They all start at the very beginning and gradually build up to the level of the first university year. The initial books were written by theoretical chemist *Roy McWeeny*, editor in chief and originator of the idea. Later, volunteers from other science areas joined. During *The EMBO Meeting* in Amsterdam for example, four biologists teamed up and started planning four volumes in the life sciences – a field yet unrepresented in the series.

Jan himself entered molecular biology as a theoretical physicist at a time when the field was still in its infancy. He was the second-only EMBO Long-Term Fellow. "I became more and more interested in the issues of learning

development, especially in parts of the world that were in the process of decolonization," he says. He spent 13 years in Mozambique, a country that was in dire straits after becoming independent in 1975. Its university had just a handful of PhD graduates; very few teachers were qualified for work at secondary schools. As head of an international team of 25 scientists, Jan helped to build up the educational system from scratch.

By the time he left Mozambique in 1989, things looked much better. Hundreds of trained secondary-school teachers were active throughout the country, and thousands of new students had entered the university. Then he moved on to other countries. Between 2002 and 2004, he was active in Congo, where he helped create a technology centre in the middle of the bush. It helped *Djo* get access to the Basic Books and connect with the outside world.

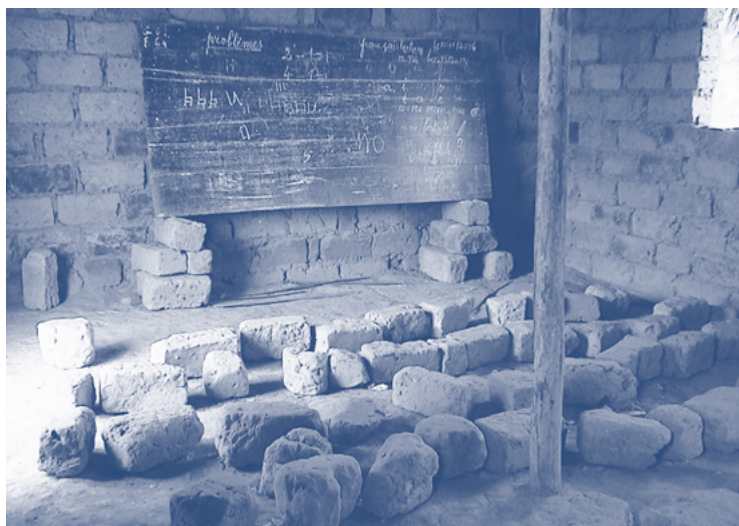
Back in Europe, Jan is still pursuing the ideal of developing educational resources for young people around the world keen on learning science. "My current interest is in human learning," he says. But he and Roy need help – for example with translating the existing books in major languages such as Spanish, Arabic, Portuguese or Hindi – or with generating more basic books. "We are open to proposals from other volunteers in the EMBO community," Jan says.

More information about the project and the basic books is available under *For the Love of Science* at www.learndev.org.

Practical training for science teachers in Botswana in the early 1970's



© Jan Visser



© Jan Visser

A typical classroom in the interior of the Democratic Republic of Congo. This classroom is supposed to accommodate 61 boys and 64 girls

Next issue:

The next EMBOencounters issue – Spring 2010 – will be dispatched in April/May 2010. You can send your contributions/news to: communications@embo.org at any time.

The deadline for the Spring issue is 28 February 2010.

Editor: Yvonne Kaul
Contributing Editor: Suzanne Beveridge
Proofreading: Meryl Schneider
Print layout: Uta Mackensen
Web version: Laura Cortesi
 Sabine Rehberger-Schneider

NEWS FROM THE EMBO COMMUNITY

A GOOD READ – PUBLICATIONS FROM THE EMBO COMMUNITY

■ articles

Proteome-wide cellular protein concentrations of the human pathogen *Leptospira interrogans*

Martin Beck (EMBO Fellow),
Ruedi Aebersold (EMBO Member) *et al.*
Nature **460**: 762–765
(15 July 2009)

Redesigning dehalogenase access tunnels as a strategy for degrading an anthropogenic substrate

Jiri Damborsky (EMBO/HIMI Startup Grantee) *et al.*
Nature Chem Biol **5**: 727–733
(23 August 2009)

Heterogenous population context determines cellular activity and virus infection patterns

Pauli Rämö (EMBO Fellow) *et al.*
Nature **461**: 520–523
(26 August 2009)

Poly(ADP-ribose)-dependent regulation of DNA repair by the chromatin remodeling enzyme ALC1

Stephen C. West, Stephen P. Jackson, Tom Owen-Hughes, Simon J. Boulton (EMBO Members) *et al.*
Science **325**: 1240–1243
(4 September 2009)

Active turnover modulates mature microRNA activity in *Caenorhabditis elegans*

Saibal Chatterjee (EMBO Fellow) *et al.*
Nature **461**: 546–549
(6 September 2009)

A human 5'-tyrosyl DNA phosphodiesterase that repairs topoisomerase-mediated DNA damage

Felipe Cortes Ledesma (EMBO Fellow) *et al.*
Nature **461**: 674–678
(1 October 2009)

Prohibitin couples diapause signalling to mitochondrial metabolism during ageing in *C. elegans*

Nektarios Tavernarakis (EMBO Young Investigator) *et al.*
Nature **461**: 793–797
(8 October 2009)

Topoisomerase I suppresses genomic instability by preventing interference between replication and transcription

Philippe Pasero (EMBO Young Investigator),
Laure Crabbé (EMBO Fellow) *et al.*
Nature Cell Biol **11**: 1315–1324
(18 October 2009)

AWARDS OF EXCELLENCE

■ EMBO Members

2009 Nobel Prizes

Nobel Foundation
Venkatraman Ramakrishnan from the MRC Laboratory of Molecular Biology in Cambridge, UK, and **Ada E. Yonath** from the Weizmann Institute of Science Rehovot, Israel, were awarded along with *Thomas A. Steitz* the 2009 Nobel Prize for Chemistry "for studies of the structure and function of the ribosome".

The Royal Society and Académie des Sciences Microsoft Award 2009

Microsoft Research
The UK's Royal Society, the French Academy of Sciences and computing giant Microsoft have teamed up for a new prize honouring researchers working in Europe who have made a major contribution to the advancement of science through the use of computational methods. This year, **Peer Bork** from EMBL Heidelberg, Germany, was selected as the recipient of this award for his research aiming to discover the relations between the nature of the human microbiome and various human parameters, such as age, ethnicity, diseases, nutrition, and genetics. The honor includes a monetary prize of 250,000 euro.

Albert Lasker Basic Medical Research Award

Lasker Foundation
John Gurdon and **Shinya Yamanaka** have received this award for their pioneering work with stem cells. Collectively, they have opened new avenues for pursuing aspects of embryonic and adult stem cell research by their discoveries relating to nuclear reprogramming. Since 1945, the Lasker Awards programme has recognized the contributions of scientists, physicians, and public servants who have made major advances in the understanding, diagnosis, treatment, cure, and prevention of human disease.

Pontifical Academy of Sciences

Edward De Robertis has been appointed by Pope *Benedict XVI* to a lifetime term on the Pontifical Academy of Sciences, a more than 400-year-old organization of 80 scientists who promote the progress of mathematical, physical and natural sciences. The academy is an international and interdisciplinary body that reports to the Pope.

Pierre and Marie Curie University in Paris

Nadia Rosenthal, Head of EMBL Monterotondo, Italy, has been made a *Doctor honoris causa* of the Pierre and Marie Curie University in Paris, France.

■ EMBO Young Investigators

Advanced Investigator Grant

European Research Council (ERC)
Nektarios Tavernarakis, of the Foundation for Research and Technology in Crete, Greece, has been awarded the prestigious ERC Advanced Investigator Grant for his proposal *Molecular Basis of Neuronal Ageing – NeuronAge*. The scheme is highly competitive and allows established leaders in any field of science, engineering and scholarship to pursue frontier research of their choice.

Starting Grant

European Research Council (ERC)
Henrik Kaessmann from the University of Lausanne, Switzerland, has been selected to receive the Starting Grant from the European Research Council (ERC) in its 2009 call for proposals. The ERC Starting Grants support early-career top research leaders who are about to establish or consolidate an independent research career in Europe. The grants are available to researchers in all fields of science, engineering, and scholarship.

Young Cancer Researcher Award

European Association for Cancer Research
Fabrizio d'Adda di Fagnana, of the Institute of Molecular Oncology Foundation in Milano, Italy, received this award in recognition of his outstanding contribution in the field of fundamental research in cancer. This award is presented on an annual basis to a young member of the Association.

■ EMBO Fellows

Young Scientist Award 2009

European Environmental Mutagens Society
Haico van Attikum from the Leiden University Medical Center, The Netherlands, received this award for his outstanding achievements in the field of chromatin remodeling and DNA damage repair.

Burnham Fishman Award

Fishman Fund
Fabian Filipp from the Burnham Institute for Medical Research in La Jolla, US, has been awarded this prize for his commitment to basic biomedical research. The awardee received \$ 5,000 to further his education and his career development.

EVENTS

■ EMBO Members

EMBO Member **David Hopwood** is co-organizing the international summer school *Microbial Metabolites: Signals to Drugs* in the Inter-University Centre (IUC) in Dubrovnik, Croatia, from 21–29 August 2010. This third meeting in the new series of summer schools will bring together scientists at post-graduate and early post-doctoral level. They will benefit from a direct exchange with teachers and fellow participants as well as from an attractive social programme in the Mediterranean region around Dubrovnik.

More information at:
www.jic.ac.uk/science/molmicro/Summerschool/index.htm

TRANSITIONS

■ EMBO Members

Giorgio Bernardi was recently elected President of the International Union of Biological Sciences (IUBS) at the organization's General Assembly in Cape Town, South Africa.

Tomi Mäkelä was appointed director of the Institute of Biotechnology, a unit of the University of Helsinki, Finland, dedicated to promote high-level research and education in biotechnology, molecular biology and cell biology. Prior to this appointment, Mäkelä served as Director of Genome-Scale Biology Research Program and as Dean of the Research at the Faculty of Medicine, University of Helsinki.

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DEADLINES

Abstract submission 15 May
Early registration 15 May

www.the-embo-meeting.org
the.embo.meeting@embo.org

SPECIAL LECTURE

Frans DE WAAL US
Prosocial Primates: Empathy, Fairness & Cooperation

KEYNOTE LECTURES

Cliff TABIN US
Elizabeth BLACKBURN US

PLENARY LECTURES

Evolution of animal forms
Alejandro SÁNCHEZ ALVARADO US
Detlev ARENDT DE
Marie Anne FÉLIX FR
Shigeru KURATANI JP

Systems biology & functional genomics

Marc VIDAL US
Edward M (Eddy) RUBIN US
Ron WEISS US
Olivier VOINNET FR

Signalling in development

Irma THESLEFF FI
Kathryn ANDERSON US
Christof NIEHRS DE
Sarah E MILLAR US

WORKSHOPS

Dynamics of chromosome organization
Susan GASSER CH – Wendy BICKMORE UK

Cellular tomography
Ohad MEDALIA IL – Achilleas FRANGAKIS DE

Stem cells & regeneration
JC IZPISÚA BELMONTE US – Brigitte GALLIOT CH

Gene network
Anne-Claude GAVIN DE – Bart DEPLANCKE CH

Modelling biological patterns
Edda KLIPP DE – Olivier POURQUIE US

Metabolomics
Johan AUWERX CH – Juleen ZIERATH SE

Dynamics of molecule ensembles in cells
Philippe BASTIAENS DE – Carsten SCHULTZ DE

Cancer genomics & stem cells
María BLASCO ES – Mariano BARBACID ES

Imprinting
Edith HEARD FR – Azim SURANI UK

DNA repair, cancer & aging
Jean-Marc EGLY FR – Judith CAMPISI US

Transdifferentiation
Thomas GRAF ES – Nadia ROSENTHAL IT

Cell contact & adhesion
Kathleen J GREEN US – Marek MLODZICK US

New insights in prokaryotes
Nicholas LUSCOMBE UK – Antoine DANCHIN FR

Metagenomics & cellular variation
Peer BORK DE – Manolis DERMITZAKIS CH

Synthetic biology
Adam ARKIN US – Wendell LIM US

Long range gene regulation
Wouter DE LAAT DE – Veronica VAN HEYNIGEN UK

Infection & autophagy
Ari HELENIUS CH – Sharon TOOZE UK

Developmental neurobiology
James BRISCOE UK – Alexandra JOYNER US

Molecular systems neurobiology
Alexander SCHIER US – Mario DE BONO UK

Cellular signalling & cell division
Pier Paolo DI FIORE IT – Isabelle VERNOS ES

PLUS!

Meet the Speaker lunches
Poster sessions
Sub-group meetings
Career development
Women in Science
Science & Society
Exhibits & Sponsor Symposia
Onsite Childcare

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