



EMBO encounters

Newsletter of the European Molecular Biology Organization

► I have now been in office as the new director of EMBO for three months. As expected, knowing EMBO from my previous involvement in committees and Council, I find the organization is going strong. Successful, long-established programmes, such as *EMBO Fellowships* and *Courses & Workshops*, and newer ones, like *Young Investigators*, are all running smoothly and delivering their services to the community. My predecessor, *Hermann Bujard*, negotiated an increase to the budget for the next five years, which, though smaller than we had hoped, is a success given the current economic situation and the cuts that have to be faced in some national science budgets. So, I could happily sit back and watch with pleasure as the organization does its work.

I do watch and also participate with pleasure, but science does not stand still, and nor can science politics and administration stand still, so I do not plan to sit back comfortably. There are three areas where I feel EMBO should develop new activities and consolidate existing ones. We should look at what the scientific community needs in scientific publishing;

we should extend the scientific spectrum of our community; and we should strengthen existing, and establish new, contacts beyond the borders of Europe.

Scientists are irritated by many aspects of the way in which the culture of scientific publishing has developed in the past decade: authors complain about the often excessive demands by referees for additional experiments, referees about the burden of reviewing (for which nobody receives any true credit), and everyone – employers, scientists, even the publishers – complains about the dominating role of the impact factor. Our careers and those of our postdocs and students are determined to a large extent by what we publish, and many of us feel that the way in which our scientific output is judged and measured is not satisfactory.

Since the role of EMBO is to serve the community of scientists, but we also publish four journals, I feel that we cannot ignore these complaints and must think about how we can contribute to developing new models for the publication of scientific data. This is not an easy task, as there are many different demands, and some of them contradict each other. The journals generate an income, which supplements our core funding received from the EMBC, the intergovernmental body of EMBO. This is used to finance programmes such as *Young Investigators*, and it allows us to pilot new

activities like *The EMBO Meeting*. Turning the journals into something completely different, with the risk of losing the income, is therefore not an attractive option. We would like to offer ways of open-access and web-based publication of scientific results, but mechanisms for guaranteeing quality need to be found, and the economics of such models need to be worked out. Together with the Head of EMBO Scientific Publications, *Bernd Pulverer*, and a newly established Scientific Publications Advisory Board (page 7), we will be discussing our options. I have no doubt EMBO will continue to come up with interesting innovations, as it has in the past,



The first 100 days

for example with the ‘transparent reviewing’ process, introduced to *The EMBO Journal* by *Pernille Rørth*.

Today, molecular biology is part of a wide range of biological disciplines, perhaps even of all of the life sciences. It does not make sense to restrict membership of EMBO to the classical fields of core molecular biology, structural biology and cell and developmental biology, from which the majority of EMBO Members are drawn. We therefore would like to strengthen our membership outside these fields, and include more members working in areas such as evolution, neurobiology, basic medical research, and ecology. Since members can not only be recruited unless they are proposed, we depend on the existing members to identify excellent candidates in these fields and propose them for election. The nomination form includes a field in which the proposer can highlight special reasons for a candidate, and this should certainly be used to flag candidates from under-represented → →

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→ → disciplines. At the same time, we will seek other means of interacting with and including new communities.

We all know that science is not a local activity, and that our scientific interactions are global. While EMBO is financed by the 27 EMBC Member States to promote molecular biology in Europe, and the funds are mostly spent within Europe, this does not mean that our activities should be insular and restricted to Europe. Top-level performance of molecular biology within Europe absolutely requires interactions beyond the borders of Europe. We already bring our colleagues from other continents to Europe through *EMBO Courses & Workshops*, and our annual conference *The EMBO Meeting*, but I feel we must establish closer ties with other nations on a broader basis. This involves not only bringing scientists from other nations to Europe, but also our showing a presence outside Europe.

I therefore welcome the introduction of *EMBO Global Exchange* which has precisely this aim. This initiative promotes lecture series of EMBO Members and Young Investigators and running workshops in partner countries, and conversely, inviting leading scientists from partner countries for lecture tours in Europe. The aim is for the scientific communities in the countries to get to know each other and their way of operating, and to disseminate knowledge about the science being done in the countries. Ideally, this will eventually lead to an intensified exchange especially of younger scientists. In the first instance, the target areas for this programme are India, China, Taiwan and Africa, but others will be included, and options for fruitful interactions outside this programme also exist.

I am aware of some of the issues that concern the EMBO membership. Issues such as the election procedures, we will continue

to monitor closely to assess the efficacy of the new measures that were introduced last year (see *EMBOencounters*, Issue 11). Another area in which I intend to become active is the interaction of EMBO with society and policy makers. I will write about these themes in the future, and, as with all our activities, welcome input from the community. ●



Maria Leptin
director@embo.org

EMBC Delegates meet in Rome

Approve funding for EMBO activities for 2010 to 2014



Toivo Maimets, EMBC President

► In two sessions per year, the European Molecular Biology Conference (EMBC) – the intergovernmental funding body of EMBO – meets to review EMBO programmes and activities. Contributions from the 27 EMBC Member States provide the majority of EMBO finances. Following on from the June meeting

held in Heidelberg, 40 delegates and advisers from the member states met in Rome on 23 November 2009 and were joined by EMBO management and representatives from EMBO Council.

During the meeting, a small increase over existing funding was approved by the member states for EMBO to deliver the EMBC General Programme over the coming five-year period from 2010 to 2014.

The scientific presentation at the November meeting was given by the Chair of EMBO Council and Nobel laureate *Tim Hunt*, titled *Models, molecules and man: basic research and the conquest of disease*. In support of an application from Bulgaria to become a member state of EMBC, Professor *Diana Petkova* from the Institute of Biophysics of the Bulgarian Academy of Sciences gave an overview of Bulgarian science. She listed access to mobility, training and enhanced cooperation with European scientists as benefits for researchers from her country from the proposed membership.

Toivo Maimets from the Institute of Molecular and Cell Biology, Estonia, was elected as EMBC President, effective January

2010. *Claudio Sunkel* (Portugal) was re-elected Vice-President for a third year and *Leszek Kaczmarek* (Poland) was elected Vice-President for the first time. *Krešimir Pavelić* (Croatia) was re-appointed EMBC Secretary General.

Outgoing president, *Peter Weisbeek* (Netherlands), closed the meeting. ●

<http://embc.embo.org>

EMBC Officers 2010

President

Toivo Maimets EE

Vice Presidents

Claudio Sunkel PT

Leszek Kaczmarek PL

Secretary General

Krešimir Pavelić HR

Chair of Strategic Working Party

Toivo Maimets EE

Expect excellence

by Charlotte Otter

► The 2010 FEBS/EMBO Women in Science Award winner *Ingrid Grummt* believes that exposure to excellence is the way forward for female scientists.

One experiment changed Ingrid Grummt's life forever. In 1973, along with her husband and their three-year-old daughter, Ingrid escaped from East Germany. The family headed to Munich, taking only their passports and their experience as post-doc fellows at the German Academy of Sciences in Berlin.

'We knew one of the directors at the Max Planck Institute of Biochemistry. He gave my husband a job and said that if I could find myself a stipend, I could work there too.' Ingrid wrote the first of many grant applications and began her life's work on the mechanism and regulation of ribosomal RNA synthesis.

Ingrid Grummt has made seminal contributions to the field of transcriptional regulation throughout her career. Today the recipient of the 2010 FEBS/EMBO Women in Science Award, heads the Division of Molecular Cell II at the German Cancer Research Centre (DKFZ).

However, science was not Ingrid's first choice when she left school. 'I wanted to study theatre science. Biology was only second on the list.' History prevented Ingrid from making a career in the theatre: in 1961, the year before she left school, the Wall went up. The East German government cancelled theatre science as a university subject and Ingrid was offered a place at the Humboldt University in Berlin to study biology.

While doing their graduate studies and first post-doctoral research at the German Academy of Science, Ingrid and her husband decided to leave. 'Many people in East Berlin thought we had it good: an apartment, a child, two jobs. But we weren't yet 30, and we had read most of the books we were allowed to read, been to the countries we were allowed to visit – that was it.'

The first six years in West Germany were tough, she admits. She had to fund her research with grant applications. 'I had no help, no mentoring, no advice. I had to learn everything by myself, mainly by my mistakes.'

Ingrid explains that many colleagues questioned her focus on genes that encode ribosomal RNA. 'I believed then, as I do now, that these genes play such a central role in cells'

life that if we could understand how transcription of these important genes is controlled in a normal cell, then we could understand what was deregulated in cells that were unhealthy.'

In 1979, Ingrid's husband was offered a professorship at the University of Würzburg. Funded by a Heisenberg Fellowship, Ingrid joined him a year later. 'I was a guest there too, left alone to run my lab. However, I had a technician to help me and some graduate students. It was a very productive time.'

After 12 years of surviving on stipends, Ingrid was offered her first permanent position in 1985 – she was appointed as a professor at the University of Würzburg. And in



Ingrid Grummt

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1990, after receiving Germany's prestigious Gottfried Wilhelm Leibniz Prize for her outstanding work, Ingrid took up her present position at the DKFZ in Heidelberg. 'We are the world's leading group in our field of research,' she smiles. 'After all these years we are still fascinated by the sophisticated mechanisms the cell uses to adapt gene expression to external signals that promote or inhibit cell growth.'

Ingrid believes that the time has arrived for women in science. 'Not only do we have the mentoring programmes and the quotas, but attitudes to women working are so different from thirty years ago. Science is very flexible, in that we have the freedom to decide whether to do an experiment today or tomorrow. This kind of flexibility supports a family life.'

However, she admits that gender is still an issue, and will continue to be until the childcare bottleneck disappears. 'I wish I could say gender is no longer an issue,' says Ingrid, 'that I was receiving this award purely for excellence in science. But we haven't reached equity yet, and so we have to keep working towards it.'

In accepting the 2010 FEBS/EMBO Women in Science Award, Ingrid is happy to be a role model for other women. 'It is important to me to inspire young women to face personal and professional challenges, to help them mobilize their strengths when in doubt and motivate

and encourage them to keep their eyes on their goals. I think that integrating career and personal goals makes people happier and more productive in the long run,' she says.

For young women starting their scientific careers, Ingrid has this to say: 'Choose your lab carefully. Expose yourself to excellence not mediocrity. Choose your partner carefully; choose someone who will support you and share 50% of the childcare burden. And above all, enjoy what you do!'

Ingrid Grummt will receive her award of 10,000 euro on 30 June at the 35th FEBS Congress in Gothenburg, Sweden, where she will present a special lecture. ●

The 2010 FEBS/EMBO Women in Science Award

► The FEBS/EMBO Women in Science Award, now in its third year, recognizes and rewards the exceptional achievements of a female researcher in molecular biology over the previous five years. Winners of the award are role models who inspire future generations of women in science.

'Ingrid Grummt is an outstanding scientist who has made seminal contributions in the field of regulation of gene expression, including the very recent discoveries that link ageing and some inherited diseases with the silencing of genes required for cell growth,' says selection committee member *Claudio Sunkel*, Director of the Institute of Molecular and Cellular Biology in Porto, Portugal.

Gerlind Wallon, EMBO deputy director, says what is exciting about Ingrid Grummt's work is that she has not redefined her sphere of research, but that in the last five years she has continued to make seminal contributions in her field.

'We are also happy to recognise a senior scientist who has done exciting work throughout her career and someone whom we have long regarded as a role model for younger women in the field of science.'

www.embo.org/policy-and-society/women-in-science/women-in-science-award.html

EMBO Events 2010

PRACTICAL COURSES

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, 23–31 May

Structural characterization of macromolecular complexes
FR–Grenoble, 31 May–5 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, 27 June–4 July

High-throughput RNAi and data analysis
DE–Heidelberg, 28 June–2 July

Single-molecule manipulation and analysis of DNA–protein interactions
FR–Paris, 11–25 July

Marine animal models in 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–Castelvecchio Pascoli (Lucca), 1–6 August

Post-translational modifications of proteins: from discovery to functional analysis
SE–Uppsala, 22–24 August

Protein expression, purification and crystallization (PEPC–7)
DE–Hamburg, 23–31 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

Computational aspects of protein structure determination and analysis: from data to structure to function
UK–Cambridge, 6–10 September

Anatomy and embryology of the mouse
HR–Split, 11–19 September

Microscopy, modelling and biophysical methods
DE–Heidelberg, 20 September–2 October

3-D developmental imaging
PT–Oeiras, 1–9 October

Advanced analysis and informatics of microarray data
UK–Hinnton, 18–23 October

Solution scattering from biological macromolecules
DE–Hamburg, 25 October–1 November

WORKSHOPS

Proteolysis and neurodegeneration (5th INPROTEOLYS meeting)
ES–Madrid, 4–7 May

Viruses and innate immunity
IE–Dublin, 5–7 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–L'Hospitalet de Llobregat (Barcelona), 10–11 May

Advanced light microscopy techniques and their applications
DE–Heidelberg, 18–21 May

Microscopy: from genome scale to the single molecule
ZA–Pretoria, 31 May–12 June

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

Disease, development and stem cells in the pancreas
SE–Stockholm, 14–16 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

Interface between the Ubiquitin family and the DNA damage response
HR–Red Island, Rovinj, 1–5 September

From fetomaternal tolerance to immunomodulatory properties of placenta-derived cells in cell therapy
IT–Brescia, 3–6 October

RNA control of cell dynamics
IL–Kibbutz Ein Gedi, 14–17 November

CONFERENCE SERIES (1st in a 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

Chemical Biology 2010
DE–Heidelberg, 22–25 September

Experimental approaches to evolution and ecology using yeast
DE–Heidelberg, 29 September–3 October

Towards a comprehensive understanding of endoplasmic reticulum functions
ES–Gerona, 3–8 October

CONFERENCE SERIES (2nd 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

Telomeres and the DNA damage response
FR–Marseille, 14–17 September

From functional genomics to systems biology
DE–Heidelberg, 13–16 November

CONFERENCE SERIES (3rd in a series)

Recombination and connections to SUMO and ubiquitin modifications
IT–Castelvecchio Pascoli (Lucca), 17–21 May

The molecular and developmental biology of *Drosophila*
GR–Kolymbari, 20–26 June

Molecular and cellular basis of regeneration and tissue repair
PT–Sesimbra, 26–30 September

Cell biology meets microbiology
PL–Krakow, 9–14 October

ESF-EMBO SYMPOSIA

Antiviral applications of RNA interference
ES–Sant Feliu de Guixols, 30 May–4 June

Emergent properties of the cytoskeleton: molecules to cells
ES–Sant Feliu de Guixols, 3–8 October

Functional neurobiology in minibrains: from flies to robots and back again
ES–Sant Feliu de Guixols, 17–22 October

Molecular perspectives on protein–protein interactions
ES–Sant Feliu de Guixols, 14–19 November

EMBO/FEBS LECTURE COURSES

The cytoskeleton in development and pathology
SE–Djurhamn, 19–24 June

Host–microbes interactions
GR–Spetses, 1–9 September

Molecular and cellular cognition
IT–Venice, 14–19 October

EMBO Global Exchange Lecture Courses

Systems neuroscience of the *Drosophila* larva: genetic and circuit bases of behavior
IN–Bangalore, 21–27 July

Molecular mechanism of protein transport
IN–Bangalore, 5–13 December

EMBO | EMBL SYMPOSIA

Human variation: cause and consequence
DE–Heidelberg, 20–23 June

Structure and function of neural circuits
DE–Heidelberg, 5–8 September

The non-coding genome
DE–Heidelberg, 13–16 October

LABORATORY MANAGEMENT COURSES

Open to all independent group leaders:

DE–Leimen (near Heidelberg) 12–15 October

UK–Ware (Hertfordshire) 2–5 November

For postdocs:

DE–Leimen (near Heidelberg) 14–16 June

DE–Leimen (near Heidelberg) 21–23 June

DE–Leimen (near Heidelberg) 5–7 October

OTHER EMBO EVENTS

The EMBO Meeting 2010 – Advancing the life sciences
ES–Barcelona, 4–7 September

EMBO Global Exchange and the Wellcome Trust/DBT India Alliance Meeting:
Life Science Research in India
ES–Barcelona, 4 September

EMBO Fellows meeting
DE–Heidelberg, 17–20 June

11th EMBL/EMBO Science & Society Conference
The difference between the sexes – from biology to behaviour
DE–Heidelberg
5–6 November

EMBO Young Investigator Meeting
DE–Leimen (near Heidelberg), 10–12 May

EMBO Young Investigator PhD Course
DE–Leimen (near Heidelberg), 20–25 September

For more information and a list of all courses, workshops, conferences and symposia please go to:

www.embo.org/events/calendar.html

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

1 February
1 August

See you in Barcelona!

10 reasons to attend
The EMBO Meeting 2010



▶ The EMBO Meeting is Europe's annual life science conference, where life scientists gather ideas, meet like-minded colleagues and take part in a range of activities to stimulate

scientific exchange. This year marks the second conference organized by EMBO, building on long-standing traditions and expertise of our scientific membership and staff.

Ten reasons to join us in Barcelona:

▶ **Expose yourself to the latest science** both inside and outside your research focus; gain new approaches and ideas from the exciting range of science presented. Two EMBO Members developed the programme – Luis Serrano from the Center for Genomic Regulation in Barcelona and Denis Duboule from the University of Geneva – together with The EMBO Meeting committee.

▶ **Connect with researchers** with similar and complementary interests; meet big names in research, potential collaborators, friends and colleagues. In 2009, participants rated access to top names in research at the Meet the Speaker lunches as a conference highlight.

▶ **Share your science** in interactive stand-alone poster sessions where you can converse with fellow scientists to discover joint research interests and possibilities for collaboration.

▶ **Brush up your career skills:** Saturday is career day featuring skill workshops to improve your communication and presentation skills, research project management and publication success. The Expanding Career Options Lunch, with a range of speakers including a science communicator, a chief scientific officer and a researcher working for a non-governmental organization, will give you an insight into alternative career paths. The Academic Career Mentoring Session, with advice from the conference speaker faculty, is also popular.

▶ **Be part of the international life science community:** last year more than 1300 scientists from over 50 countries worldwide took part.

▶ **Learn about the latest equipment and technology:** in the exhibition area, sponsor symposia and innovation forums, young start-ups and research institutes spotlight their latest discoveries.

▶ **Save by bringing your colleagues and friends!** Group discounts are available for the first time this year: pay three full participant rates and get the fourth place at student rate or pay three student rates and get the fourth place at 90 euro.

▶ **The EMBO Meeting is open to everyone.** You don't have to have received an EMBO Fellowship or be part of the Young Investigator network. You will benefit from the expertise of more than 120 speakers and a programme developed by scientists for scientists.

▶ **Visit a local research institute:** the area is home to more than 400 life science research groups and the conference venue is next door to the University of Barcelona – you can make new contacts or say 'hola' to old friends!

▶ **Finally – the sights!** Gaudi's creations, the old town, Barcelona FC, Las Ramblas, Picasso Museum and the nightlife...you won't be disappointed. See back cover for hot tips from Barcelona locals.

www.the-embo-meeting.org

EMBO Poster Prize competition

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

Tibor Pastor

International Centre for Genetic Engineering and Biotechnology (ICGEB), Trieste, Italy

Facilitation of intron processing by an Alu-derived intronic splicing enhancer in ATM.

Presented at the EMBO Workshop Messenger RNA 3' ends and gene expression

UK–Oxford,
16–20 September 2009

Volodymyr Nazarko

Institute of Cell Biology NAS of Ukraine, Lviv, Ukraine

Atg34, a micropexophagy-specific protein required for efficient MIPA formation.

Presented at the EMBO Conference Series Autophagy – cell biology, physiology and pathology

CH–Ascona,
18–21 October 2009

Alessandra Rogato

Equipe de Génomique fonctionnelle des diatomées / Diatom Functional Genomics, Laboratoire de Génomique des Microorganismes, Paris, France

RNA interference in marine diatom *Phaeodactylum tricorutum*.

Presented at the EMBO Workshop Evo-Devo meets marine ecology: new frontiers in ocean science through integrative biology

IT–Ischia (Napoli),
9–11 October 2009

Ana Hocevar

Department of Theoretical Physics, Jozef Stefan Institute, Ljubljana, Slovenia

Geometry of bulk lipid vesicle aggregates.

Presented at the EMBO Conference Series Physics of cells: from the edge to the heart (Physcell2009)

HR–Primosten (Split),
6–13 September 2009

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.

THE EMBO JOURNAL

RESEARCH ARTICLES

Myc-regulated microRNAs attenuate embryonic stem cell differentiation.

Lin CH, Jackson AL, Guo J, Linsley PS, Eisenman RN
EMBO J (2009) **28**(20): 3157–3170

SnoN functions as a tumour suppressor by inducing premature senescence.

Pan D, Zhu Q, Luo K
EMBO J (2009) **28**(22): 3500–3513

The target of rapamycin complex 2 controls dendritic tiling of *Drosophila* sensory neurons through the Tricornered kinase signalling pathway.

Koike-Kumagai M, Yasunaga K, Morikawa R, Kanamori T, Emoto K
EMBO J (2009) **28**(24): 3879–3892

Antagonism of Beclin 1-dependent autophagy by BCL-2 at the endoplasmic reticulum requires NAF-1.

Chang NC, Nguyen M, Germain M, Shore GC
EMBO J (2010) **29**(3): 606–618

A functional peptidyl-TRNA hydrolase, ICT1, has been recruited into the human mitochondrial ribosome.

Richter R, Rorbach J, Pajak A, Smith PM, Wessels HJ, Huynen MA, Smeitink JA, Lightowlers RN, Chrzanowska-Lightowlers ZM
EMBO J 2010 **29**(6): 1116–1125

Regulation of natural killer T-cell development by deubiquitinase CYLD

Lee AJ, Zhou X, Chang M, Hunzeker J, Bonneau RH, Zhou D, Sun S-C
EMBO J (AOP March 2010)
doi:10.1038/emboj.2010.31

EMBO reports

RESEARCH ARTICLES

Mitochondrial dynamics regulate the RIG-I-like receptor antiviral pathway

Céline Castanier, Dominique Garcin, Aimé Vazquez & Damien Arnoult
EMBO rep (2010), **11**: 133–138

Mdm10 as a dynamic constituent of the TOB/SAM complex directs coordinated assembly of Tom40

Koji Yamano, Sachiko Tanaka-Yamano & Toshiya Endo
EMBO rep (2010), **11**: 187–193

REVIEWS

Ionotropic and metabotropic mechanisms in chemoreception: ‘chance or design’?

Ana Florencia Silbering, Richard Benton
EMBO rep (2010) **11**: 173–179

Induced pluripotent stem cells and senescence: learning the biology to improve the technology.

Ana Banito and Jesús Gil
EMBO rep (AOP April 2010)

SCIENCE & SOCIETY

System crash

Laurent Ségalat
EMBO rep (2010), **11**: 86–89

The science of online dating

Giovanni Frazzetto
EMBO rep (2010) **11**: 25–27

molecular systems biology

RESEARCH ARTICLES

Systematic image-driven analysis of the spatial *Drosophila* embryonic expression landscape.

Frise E, Hammonds AS, Celniker SE.
Mol Syst Biol **5**: 345

Different sets of QTLs influence fitness variation in yeast.

Romano GH, Gurvich Y, Lavi O, Ulitsky I, Shamir R, Kupiec M.
Mol Syst Biol **6**: 346

Feedback between p21 and reactive oxygen production is necessary for cell senescence.

Passos JF, Nelson G, Wang C, Richter T, Simillion C, Proctor CJ, Miwa S, Olijslagers S, Hallinan J, Wipat A, Saretzki G, Rudolph KL, Kirkwood TB, von Zglinicki T.
Mol Syst Biol **6**: 347

Synthesizing a novel genetic sequential logic circuit: a push-on push-off switch.

Lou C, Liu X, Ni M, Huang Y, Huang Q, Huang L, Jiang L, Lu D, Wang M, Liu C, Chen D, Chen C, Chen X, Yang L, Ma H, Chen J, Ouyang Q.
Mol Syst Biol **6**: 350

Zebrafish Pou5f1-dependent transcriptional networks in temporal control of early development.

Onichtchouk D, Geier F, Polok B, Messerschmidt DM, Mössner R, Wendik B, Song S, Taylor V, Timmer J, Driever W
Mol Syst Biol **6**: 354

EMBO Molecular Medicine

EDITORIAL

The promise and the challenge of modelling human disease in a dish.

Fred Gage
EMBO Mol Med **2**(3): 77–78

RESEARCH ARTICLES

A systems biology approach to understanding atherosclerosis.

Stephen A. Ramsey, Elizabeth S. Gold, Alan Aderem
EMBO Mol Med **2**(3): 79–89

The role of ELOVL1 in very long-chain fatty acid homeostasis and X-linked adrenoleukodystrophy.

Rob Ofman, Inge M. E. Dijkstra, Carlo W. T. van Roermund, Nena Burger, Marjolein Turkenburg, Arno van Cruchten, Catherine E. van Engen, Ronald J. A. Wanders, Stephan Kemp
EMBO Mol Med **2**(3): 90–97

Stat5 is indispensable for the maintenance of bcr/abl-positive leukaemia.

Andrea Hoelbl, Christian Schuster, Boris Kovacic, Bingmei Zhu, Mark Wickre, Maria A. Hoelzl, Sabine Fajmann, Florian Grebien, Wolfgang Warsch, Gabriele Stengl, Lothar Hennighausen, Valeria Poli, Hartmut Beug, Richard Morigg, Veronika Sexl
EMBO Mol Med **2**(3): 98–110

Next issue

The next *EMBOencounters* issue – Autumn 2010 – will be dispatched in September/October 2010. You can send your contributions/news to: communications@embo.org at any time. The deadline for the Autumn issue is **30 July 2010**.

Acting editor: Suzanne Beveridge
Contributing Editor: Charlotte Otter
Proofreading: Meryl Schneider
Print layout: Uta Mackensen
Web version: Sabine Rehberger-Schneider

Charlotte Otter is a freelance writer and editor, who specialises in writing for business and breathing life into tired copy. Her website is www.charlotteotter.com

Yvonne Kaul,
editor of *EMBO encounters*
is on maternity leave.
Our congratulations to
Yvonne and Felix on
the arrival of

Greta Hedi
on Sunday 21 March.

As the discipline of molecular biology has evolved, so has the EMBO family of journals (see sidebar). The EMBO publications quartet reflects the blurring boundaries between molecular, cellular and developmental biology, and the expansion of molecular biology from a traditionally 'nucleocentric' science to a spectrum of fields ranging from medical to environmental sciences.

Like all families, each of our journals has its own personality while relating to a common thread of molecular biology. An overriding theme associated with the initiatives described below is to provide the global molecular biology community with a means to disseminate scientific information in a form optimized for the internet age while maintaining the EMBO qualities of fairness, expertise, efficiency and transparency. Research papers will evolve from being largely a record of research achievement to a fully-fledged research tool that others can directly build upon.

Scientific publications advisory board

To facilitate these developments, we are happy to be able to call on a new publications advisory board of international scientific leaders from the EMBO Membership and experts in funding and publishing (see box).

EMBO Scientific Publications Advisory Board (current members)

Ivan Dikic	Angela Nieto
Ernst Hafen	Helen Saibil
Reinhard Jahn	Alan Schafer
Richard Losick	Tadasugu Taniguchi
Linda Miller	

Scope and policies

We are evaluating the scope of the four EMBO publications, with a particular emphasis on capturing new research areas in *EMBO reports* and *EMBO Molecular Medicine* where molecular biology techniques have an impact.

More explicit editorial policies will be introduced on authorship; on materials and data sharing; on supplementary information and data quality, such as statistical and image processing guidelines. A paper in an EMBO publication must meet the central tenet of the scientific process of reproducibility.

Editorial process

In our view, the most effective means of selecting the best manuscripts is via independent professional editors with academic credentials who are advised both by an editorial board and a thorough, anonymous peer review process. Nevertheless, we are highly

The evolution of scientific publishing

Bernd Pulverer, Head of EMBO Scientific Publications, explains new directions and initiatives for our four journals

conscious that this process can on rare occasions be marred by abuse or superficiality. While all the evidence shows that referee anonymization is essential, *The EMBO Journal* remains the only journal publishing online referee reports, author rebuttals and editorial decisions in 'peer review process files'. Since May 2009, we have published over 200 such files with less than 8% author opt outs and no decrease in review quality.

This transparent review process will be extended to all four titles, complemented by the publication of detailed editorial process statistics. We will assess additional ways to enhance the peer review process in terms of efficiency, quality and the transfer of reports between journals, and we may add commenting. We aim to develop mechanism to afford appropriate credit to referees for their valuable assistance.

Enhanced procedures allow detection of plagiarism and image manipulation before acceptance of papers.

Platforms

In the longer term, we will also consider providing platforms for high quality confirmatory, negative and refuting data.

The vast majority of EMBO papers are read online. A key development will be to move from the current representation of print online (PDF format) to a dynamic layout that facilitates navigation through an article and that provides efficient means to link out into supporting databases and the literature (augmented browsing).

Conversely, it will be essential to make research papers machine readable, so that information can be systematically extracted and analyzed.

Further down the line, we will focus on data: we aim to publish 'real' high-resolution data, rather than author processed flat representations of data at low resolution. *Molecular Systems Biology* already publishes data underlying graphs to allow re-plotting and analysis by the reader.

This is an exciting time for scientific publishing as online technologies mature and scientific publishing models evolve. With your help, we hope to play a leading role in these developments and invite your feedback,

Three decades of EMBO Scientific Publishing

When EMBO was founded 46 years ago, its remit was 'the establishment of networking activities to enhance interactions between European laboratories'. The organization's second Director, **John Tooze**, rightly felt that the dissemination of validated scientific data fell squarely within its scope and that the EMBO community was well placed to produce a high quality scientific journal.

Launched in 1982 and edited by John Tooze, **Iain Mattaj**, and later **Pernille Rørth**, *The EMBO Journal* quickly emerged as a leading molecular biology publication.

In 2000, **Frank Gannon** founded *EMBO reports*. The emergence of systems biology over the last decade resulted in the launch of *Molecular Systems Biology* in 2005. Co-owned by Nature Publishing Group, *Molecular Systems Biology* has risen to become the pre-eminent title in the field. Last year, *EMBO Molecular Medicine* started publishing translational research to reflect the increasingly prevalent application of molecular techniques to clinical research. **Les Griwell**, who retired last November, managed the editorial and publication processes of the journals for over five years (see *EMBOencounters*, Issue 14).

The scope of *The EMBO Journal* has grown apace with the development of the discipline of molecular biology to encompass cell and developmental biology, although the common strand remains the molecular mechanistic understanding of biological processes. *EMBO reports* specializes in high quality, short-format papers reporting singular outstanding advances in any aspect of molecular and cellular biology. In addition, it contains reviews and conference reports, as well as a unique *science & society* section, encompassing commentary and analysis by both academic and journalist authors. EMBO scientific publications currently includes 16 professional editors, 12 senior academic editors, 272 editorial advisory board members and five administrative staff.

be it anecdotal or systematic, critical or complimentary. ●

A frog and a flower again

Nature images win
The EMBO Journal's
2010 Cover Contest
for the second year
in a row



© Badri Nath Singh 2009

Winner in the category Non-Scientific Image

Two images from a record number of 1,453 excellent submissions leapt out at the jury in *The EMBO Journal's* 2010 cover contest. These were *Badri Nath Singh's* portrait of a frog and *Martin Oeggerli's* microscopic view of a flower.

Martin, a researcher from Basel, Switzerland, won the prize "Best Scientific Image" for his beautifully coloured scanning electron microscopic picture of a daisy floret. He is a renowned photographer whose work has



© Martin Oeggerli 2009

Winner in the category Scientific Image

appeared in *National Geographic*, *GEO*, *Focus*, *Nature Publishing Group*, *Cell* and *Reader's Digest*. For examples of his explorations of the microcosm surrounding us, see www.micro-naut.ch. The judges were enchanted by *Badri Nath Singh's* image of a green frog in a pond and awarded it "Best Non-Scientific Image". *Badri* works at the Robert Wood Johnson Medical School, New Jersey, USA, and you can view his photography at www.flickr.com/photos/bnsingh.

Given that the subject of last year's winning image was a tree frog on a flower, the jury wishes to emphasize that there is no pro-amphibian or pro-angiosperm bias in the selection process. Authors and readers should keep submitting non-frog and non-flower pictures to the contest. *The EMBO Journal* will showcase some of 2010's short-listed images on forthcoming covers later in the year. The editors and the other members of the jury would like to thank all participants, whose enthusiasm continues to make this contest such an enjoyable experience for everyone. ●

MIT's charm school

by *Carol Preston*,
a communications consultant
based in Washington, DC

Brilliant technologists and scientists also need to be communicators. By communicating ideas effectively, scientists can reach beyond a peer-to-peer audience, disseminate their findings more widely, enhance understanding and reach more research funding. Since 2005, Boston's Massachusetts Institute of Technology (MIT) has required undergraduates to take four writing and oral communications courses in order to learn how to explain their work to others.

Here are some of the communications tools MIT students learn:

- Audience focus:** Speakers learn to create a profile to include audience interest; relationship to themselves; subject knowledge, education, gender, and age
- Key audience questions:** Speakers try to answer three key questions: 'What's the news?', 'Why should I care?' and 'What's in it for me?'
- Translation:** Speakers use their audience profile to drive their word choices. For a science audience, they use scientific language, while for a lay audience their language should be more consumer-friendly.
- Sticky messages:** Have no more than three core messages and keep them concise. By repeating the messages three to seven times during a presentation and by using examples, students ensure that their audience retains much more information.
- The messenger:** Speakers should vary their voice and body language to ensure that their messages stick. Tone and body language can enhance or dilute impact by 93%.

Upcoming deadlines

1 August

EMBO
Courses & Workshops

1 August

EMBO
Global Exchange

15 May

The EMBO Meeting
Abstract submission
Early registration

15 August

EMBO
Long-Term Fellowships

Communicating science

Evolutionary biologist Greger Larson talks to Charlotte Otter for EMBOencounters about taking part in a BBC Horizons programme and how he communicates science to a lay audience.

► In January this year, *BBC Horizons* screened an hour-long programme called *The Secret Life of the Dog*. It featured scientists around the world who are researching modern and ancient relationships between humans and dogs and whose work is changing the way we view our pets. The programme communicated new ideas about dogs' intelligence, how they have evolved to be attuned to humans and how barking is a form of communication not used by the dog's wild cousin, the wolf. One of the scientists interviewed in the programme was former EMBO Fellow and evolutionary biologist *Greger Larson*, whose DNA labs are based at Durham University in the Archaeology Department.

Greger, what led the BBC to you?

I'm working on domestication as a model for evolution, and I have been involved in several studies that use DNA to understand how domestic animals evolved. When the programme was being planned, BBC researchers read some of my papers, and I simply received a phone call. They wanted me to talk about my research on dog domestication and how that affected agriculture and civilization. Also, with our expertise in ancient DNA and molecular clocks, they wanted to hear how DNA had contributed to answering the when and how questions.

Have you had any similar experience with the media?

Actually, yes. In 2008, I co-wrote and hosted a pilot programme on the effect of food on human evolution and civilization. We spent three weeks filming around the globe and several months putting it together in the studio. The *Discovery Channel* aired the programme called *Primal Connections* in 2009. It was an amazing experience that taught me a lot about TV.

How do you feel about being in front of the camera?

Maybe I'm a bit unusual, but I enjoy it. Although I always get a little nervous, my natural inclination is to talk. However, in the pilot, I realized that unless it's live TV, you can always do another take or 20. If you say something and it's not quite right, you can

Greger Larson demonstrates relationship between people and animals during filming of *Primal Connections*.



stop the camera and try again. Many scientists don't realise this.

How did the BBC's interview process work?

They came and spent all day with me in the lab filming and asking a series of questions. They also interviewed my colleague, *Peter Rowley-Conwy*, a professor in the department of Archaeology. That was it, until they emailed us to say when the programme would air.

What did you think of the end product?

I thought it was good TV. The production values were high and it was professional and creative. They interviewed many people whose work I know, but I was interested to hear about a couple of scientists whose work I hadn't heard of. For example, it was the first time I'd heard of the researcher identifying barks as a form of communication. I liked the way they cut between researchers talking about science and laypeople talking about their dogs.

Are there any downsides to communicating science via television?

TV is a very passive medium and you get a short space to explain complex ideas. There is little room for ambiguity or uncertainty. As a result, you walk a delicate tightrope between making it exciting and saying something outlandish. For example, the programme quoted me as saying, 'Without dog domestication, there wouldn't be civilization'. A few colleagues called me up afterwards to ask if that was true. Having studied it, I can back it up, but when it's out there as a sound bite without its supporting context, it can make you sound like you are going out on a limb. It's a balance between keeping the interest of the viewers and also maintaining your scientific integrity.

On the other hand, you can't give one-word answers, so you really have to think things through before you say them.

Do you have tips for scientists communicating with the media?

If it's not live TV, don't be afraid to make mistakes. You can always go back and do it again. Knowing this takes the pressure off you. Before the TV crew arrives, have some idea of what they want from you and think of a few points in advance. Remember they're interested in what you say, not in you. You're just a talking head.

How should scientists face the challenge of communicating complex ideas in simple ways?

They have to use broad strokes. I think it's the obligation of scientists to be able to explain what they are doing to a six-year-old. They need to be enthusiastic, show that they are passionate about what they do and evoke those feelings in others. People are curious; they want to know about stuff and scientists should make the most of that.

How would you explain what you do to a layperson?

Now you've got me! I investigate the patterns and processes of domestication using modern and ancient DNA to understand evolution and human civilization.

Do you have a dog?

No, unfortunately. With the amount I travel, it wouldn't be fair. But I grew up with dogs and I really hope to have one again. It's a question of when, not if.

► For more information about Greger Larson's research, visit his lab's website at www.dur.ac.uk/greger.larson

advancing the life sciences

the EMBO meeting

BARCELONA
4–7 September
2010

Submit abstracts & register early
by 15 May
the-embo-meeting.org

WORKSHOPS

Dynamics of chromosome organization
Susan **Gasser** | Wendy **Bickmore**

Cellular tomography

Ohad **Medalia** | Achilleas **Frangakis**

Stem cells & regeneration

JC **Izpisua Belmonte** | Brigitte **Galliot**

Gene network

Anne-Claude **Gavin** | Bart **Deplancke**

Modelling biological patterns

Edda **Klipp** | Olivier **Pourquie**

Metabolomics

Johan **Auwerx** | Juleen **Zierath**

Dynamics of molecule ensembles in cells

Philippe **Bastiaens** | Carsten **Schultz**

Cancer genomics & stem cells

María **Blasco** | Mariano **Barbacid**

Imprinting

Edith **Heard** | Azim **Surani**

DNA repair, cancer & aging

Jean-Marc **Egly** | Judith **Campisi**

Next generation sequencing

Thomas **Lemberger**

Transdifferentiation

Thomas **Graf** | Nadia **Rosenthal**

Cell contact & adhesion

Kathleen J **Green** | Marek **Mlodnick**

New insights in prokaryotes

Antoine **Danchin** | Nicholas **Luscombe**

Metagenomics & cellular variation

Peer **Bork** | Manolis **Dermitzakis**

Synthetic biology

Adam **Arkin** | Wendell **Lim**

Long range gene regulation

Wouter **De Laat** | Veronica **Van Heynigen**

Infection & autophagy

Ari **Helenius** | Sharon **Tooze**

Developmental neurobiology

James **Briscoe** | Alexandra **Joyner**

Molecular systems neurobiology

Alexander **Schier** | Mario **De Bono**

Cellular signalling & cell division

Pier Paolo **Di Fiore** | Isabelle **Vernos**

SPECIAL LECTURES

Frans **De Waal**
Richard **Losick**

KEYNOTE LECTURES

Cliff **Tabin**
Elizabeth **Blackburn**
Austin **Smith**
Michel **Haïssaguerre**

PLENARY LECTURES

Evolution of
animal forms
Alejandro **Sánchez**
Alvarado
Detlev **Arendt**
Marie-Anne **Félix**
Shigeru **Kuratani**

Systems biology & functional genomics

Marc **Vidal**
Edward (Eddy) **Rubin**
Ron **Weiss**
Olivier **Voinnet**

Signalling in development

Irma **Thesleff**
Kathryn **Anderson**
Christof **Niehrs**
Sarah E **Millar**

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EMBO

EVENTS

EMBO Members

Gerrit van Meer and Daniela Corda – together with Karel Wirtz – are organizing the FEBS Workshop titled **Eukaryotic lipids: treasure of regulatory information** on 19–24 June in Spetses, Greece.

TRANSITIONS

EMBO Members

Fotis Kafatos leaves the presidency of the European Research Council to focus on his malaria research at Imperial College, London. Kafatos was a former Director General of EMBL.

From January 2010, Alfonso Martinez Arias is the director of the Center for the Physics of Medicine at the University of Cambridge. The center is a new initiative aiming to bring together biology, physics and engineering to work on problems of biomedical interest.

A GOOD READ – PUBLICATIONS FROM THE EMBO COMMUNITY

Books

Springer will publish a new edition of the textbook *Microbial Biochemistry* by EMBO Member Georges Cohen in Spring 2010.

AWARDS OF EXCELLENCE

EMBO Members

Harvard immunologist Klaus Rajewsky received the Max Delbrück Medal for his work on the development and function of B cells and his research on lymphoma development, especially Hodgkin's lymphoma.

Detlef Weigel, Director at the Max Planck Institute for Developmental Biology in Tübingen, was awarded the Otto Bayer Prize 2010 in honour of his work in the field of plant genetics that allow predictions on how wild, as well as agricultural plants, adapt to climate change.

The BINDER Innovation Prize from the German Society for Cell Biology was presented to Anne Spang, professor at Biozentrum in Basel, on 10 March for her outstanding work in the area of cell biology. Spang was also an EMBO Young investigator from 2003 to 2005.

ERC Advanced Grants were awarded to Ivan Dikic, Regine Hengge, Jürgen Knoblich, Christof Niehrs.

Titia de Lange was awarded a five-year grant of \$400,000 from the American Cancer Society and named an American Cancer Society Research Professor.

The Wolf Prize in Medicine 2010 was awarded to Axel Ullrich for his groundbreaking work in cancer research.

The President of Germany presented Walter Gehring with the Great Order of Merit from the Federal Republic of Germany on 4 January 2010.

Young Investigators

Óskar Fernandez-Capetillo, head of the Genomic Instability Group at the Spanish National Cancer Center (CNIO), received the Eppendorf Award for Young Investigators for outstanding achievements in biomedical research based on molecular biology methods. The award is presented in partnership with the scientific journal Nature.

Feeding the world in times of global changes

Two sessions presented by

EMBO Science
& Society

ESOF 2010 EUROPEAN SCIENCE OPEN FORUM
TORINO | SUNDAY 4 JULY

SESSION 1 | 09:00–10:15

**Matching food demand
and food supply in a changing
world – Global and European
perspectives**

Pallab Ghosh **CHAIR**
BBC, UK and President of the World
Association of Science Journalists

Prem Bindraban
Director of ISRIC World Soil Information,
Wageningen University, The Netherlands

Gianluca Brunori
Department of Agronomy and Management
of Agro-ecosystems, University of Pisa, Italy

SESSION 2 | 10:30–11:45

**Can science and technology
help find sustainable solutions
to feed 9 billion people?**

Pallab Ghosh **CHAIR**
BBC, UK and President of the
World Association of Science Journalists

Sir David Baulcombe
University of Cambridge, UK

Salvatore Ceccarelli
ICARDA, Syria

Susanne Benner **PANELIST**
Head of Communication, BASF Plant Science,
Germany

Andrea Ferrante **PANELIST**
President, Italian Association for
Biological Agriculture

EMBO | EMBL Symposia

Advanced Training Centre
HEIDELBERG | GERMANY

Human Variation: Cause and Consequence 20-23 JUNE 2010

Gonçalo Abecasis
Ewan Birney
Andrew Wilkie

Registration Deadline: 15 April 2010

Structure and Function of Neural Circuits 5-8 SEPTEMBER 2010

Cori Bargmann
Barry Dickson

Registration Deadline: 13 June 2010

The Non-Coding Genome

13-16 OCTOBER 2010

David Bartel
Thomas Gingeras
Elisa Izaurralde
Gerhart Wagner

Registration Deadline: 18 July 2010



For more information please go to

www.embo-embl-symposia.org

Open

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EMBL's new building to be
nucleus for continuous training
and scientific exchange



ADVANCED TRAINING CENTRE
OPENING | 9 MARCH 2010

German
Minister for
Education and
Research,
Annette
Schavan, speaks
at the open-
ing of the new
EMBL Advanced
Training Centre.

German Minister for Education and Research, *Annette Schavan*, opened EMBL's Advanced Training Centre for the life sciences on the Heidelberg campus on 9 March. The architecture of the building is inspired by the structure of the double helix that carries DNA.

With a total space of around 17,000 square metres, an auditorium for an audience of 450 people and a large display area for the presentation of scientific posters, the EMBL Advanced Training Centre offers unique conditions for scientific conferences and events. It also contains teaching laboratories and computer training rooms for the education of young scientists, teachers and students.

"This new centre in Heidelberg will form a central European platform where scientists from different countries, disciplines and generations can meet to exchange ideas and their best practices," says Minister Schavan.

"Up to 6,000 course and conference participants will gather at the EMBL Advanced Training Centre annually and make it the

prime hub for the international life sciences elite," says *Iain Mattaj*, EMBL Director General.

Financial support for the building project came from the German Ministry for Education and Research (BMBF) that contributed 14 million Euro, the *Klaus Tschira Foundation* with 10 million Euro and the federal state of Baden-Württemberg with one million Euro, complemented by the contribution of the EMBL member states.

"Scientists never really complete their education; there are always new things to learn. This is why our foundation is especially concerned with training projects and the promotion of young talents," says *Klaus Tschira*, whose foundation supports the natural sciences, computer science and mathematics.

The new building also houses 80 EMBL staff members from administration and scientific management. ●

► Cosmopolitan Barcelona offers something for everyone: thriving restaurants, bars and shops; thrilling architecture and museums; world-famous landmarks such as the *Sagrada Família* and panoramic vistas from *Parc Güell* or *Montjuïc*. To help you plan your stay, *EMBO* encounters asked some Barcelona insiders for their top tips.

Christos Gekas, a post-doc fellow working on haematopoietic stem cells at the Barcelona Biomedical Research Park (PRBB), says his favourite spot is right outside his office: the beach. Boasting an average of seven hours of daily sunshine, the beach of *Barceloneta* bustles with activity all year round. 'It's the logical endpoint to a hard day's work,' he smiles.

Christos recommends a stroll down the beach promenade on *Passeig Marítim de Barceloneta*, a *paella* at one of the many beachside restaurants or a fresh *mojito* in a *chiringuito* (beach bar). 'Then head for one of the several nightclubs in front of the PRBB. Who knows, you may just encounter your next future collaborator. See you in Barcelona!' says the Greek-Swedish national.

The best thing to do in Barcelona is get lost, claims *Aaron Alt*, an Austrian-Israeli post doc at the Institute of Biomedicine of Valencia. He suggests getting lost in the Gothic Quarter (*Barrio Gótico*). 'Walking around the little alleys late at night, when most of the tourists are asleep in their hotels, you feel transported back in time.'

For great food, he recommends *Tapas 24* (Calle Diputacio, 269), a small bar serving traditional tapas with a modern twist at mid-price ranges. The chef, who worked at Spain's famous *El Bulli* restaurant, also runs a Michelin-starred restaurant elsewhere in the city. 'Get to *Tapas 24* before 2pm to get a seat without waiting in line.' Aaron says the food stalls at the *Las Ramblas* market serve the freshest seafood in the city.

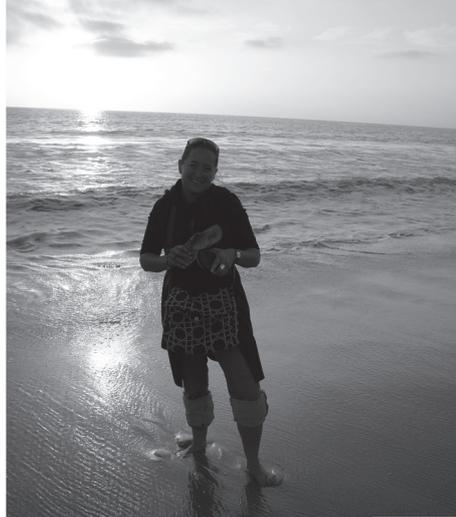
If you're interested in Barcelona's nightlife, you could try out *Bosc de les Fades* at the end of *Las Ramblas*. The bar is designed to look like an enchanted forest and enjoys the occasional thunder-storm. There are many other bars around the *Catedral del Mar*.

After a night out, breakfast might be on your mind and *Fyodor Kondrashov*, a group leader at the Centre for Genomic Regulation, says that the *Bar Boqueria* at the *Boqueria* market is a great place to eat and take in Barcelona's culinary lifestyle.' Another great thing to do is have a coffee on *Rambla del Raval* and climb *Montjuïc* (or take the funicular) to the castle for the best views of Barcelona.

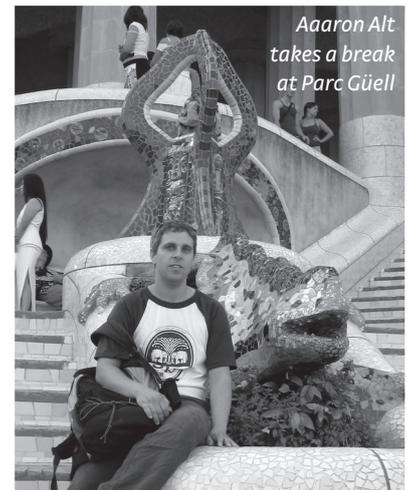
Russian Fyodor also recommends Barcelona's oldest restaurant, *Culleretes* (Carrer Quintana, 5), which has been serving up suckling pig at reasonable prices since 1786. His top art tip is the 'graffiti art gallery' at the abandoned factory on *Central Tèrmica de Sant Adrià de Besòs* on the *Avenida Eduard Maristany*.

For great modern art, *Julia von Blume*, a German post doc at the *Vivek Malhotra* lab at the Centre for Genomic Regulation, recommends the *Museu d'Art Contemporani de Barcelona* (MACBA). 'This architecturally amazing modern building, designed by *Richard Meier*, is placed directly in the middle of the historical quarter *Raval*,' she says.

If you tire of the city, Fyodor and Julia suggest hopping on a train for the beaches, such as *Ocata* at *El Masnou*. 'These beach villages are the places to relax and enjoy authentic Catalan culture,' Julia says. ●



Julia at Ocata beach, El Masnou



Aaron Alt takes a break at Parc Güell

The insider's guide to Barcelona

by Charlotte Otter



Julia von Blume outside MACBA



Christos Gekas enjoys sun and sand at Barceloneta