



# EMBO encounters

Newsletter of the European Molecular Biology Organization

## Rethinking mental disorders

**Nikolas Rose** from the BIOS Centre at the London School of Economics talks about how a mental disorder is defined, how psychiatry is influenced by neurosciences and the controversial revision of the manual of psychiatric diagnosis. Rose is keynote speaker at *Making sense of mental illness: biology, medicine and society*, the EMBO | EMBL Science & Society Conference to be held in Heidelberg from 4–5 November.

**Nikolas, how big is the impact of mental health issues on today's society?**

There is an increasing belief among professionals and lay persons that many troubles of everyday life, as well as more serious problems, result from mental disorders. Policy makers are particularly concerned that mental illness not only produces distress for individuals and their families, but also leads to the loss of many working days and is costly for social and health services.

**Why do you think this topic has recently received so much attention?**

Partly this is a result of awareness campaigns by many organizations; and partly because increasingly people are willing to speak out about their experience of mental ill health. There is also the growing awareness of the problems of dementia due to an aging population. Also, almost all of us have experienced our parents, relatives or close friends suffering from mild, moderate or even severe psychiatric conditions.

**Can we speak of a global epidemic of mental disorder?**

The statistics certainly paint an alarming picture. The epidemiology both in the US and in Europe – the wealthiest and healthiest regions of

the world – suggests that 25 per cent of adults not currently receiving psychiatric treatment could be diagnosed for mental disorders at any time; and the WHO predicts that by the year 2020 depression will be one of the leading causes of ill health.

**What caused such an explosion?**

This is a matter of dispute. Is there genuinely so much mental ill health? Are the figures a result of flawed research methods? Are they a consequence of increased recognition fuelled by awareness campaigns, some funded by those that stand to gain? Or does this have something to do with the diagnostic procedures themselves? Even minor mental troubles now come within the scope of psychiatric diagnostic manuals. The American Psychiatric Association – currently revising the Diagnostic and Statistical Manual of Mental Disorders (*see info box*) – is coming to the view that one should move away from categorical distinctions to a dimensional approach. Some say that this might lead to even more people being 'suitable cases for treatment'.

**If such a huge percentage of the population is affected then perhaps this is simply an inherent part of our lives.**

Many do make that argument, and this is one of the interesting areas of our conference. In my introductory talk I'll try to explain the dilemma: (*continued on next page*) → →

### INFO BOX | Revision of psychiatric diagnostic manual

First published in 1952, the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) is at the heart of mental health research, planning, policy and treatment in the US and in varying degrees around the world. It is a powerful tool that determines who gets diagnosed as mentally ill, who receives what kind of drugs, which

law breakers may be confined in psychiatric institutions instead of being imprisoned and how much insurance companies pay for treatment. Over the last decades, more mental disorders have been included in the manual, although some have also been removed, most notably homosexuality. Critics say that proposed

additions to the fifth edition – the first complete revision since 1994 – will lead to an increase in the number of people being diagnosed with mental disorders and treated, sometimes with unnecessary drugs that have troublesome side effects. The new edition is due out in May 2013.

### HIGHLIGHTS

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**Carol V. Robinson** –  
2011 FEBS | EMBO Women  
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best of The EMBO Journal  
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# Rethinking mental disorders (cont.)

Interview with *Nikolas Rose*

where should one draw the boundaries between a condition that is appropriate for diagnosis and treatment and a condition that is part of everyday life that people need to accept? Where does childhood bad behavior end and ADHD begin? Normal sadness end and depression begin? Age-related memory loss end and Mild Cognitive Impairment begin? Many individual and social consequences flow from the way we draw these lines.

## Which therapies for mental disorder have made the biggest progress in the last decades?

I think one can detect a growing disenchantment with psychopharmaceuticals as the universal therapy of choice. In the eighties and nineties many people began to argue that depressive conditions were very common in society and needed to be treated. That went hand in hand with the development of the new anti-depressants called Selective Serotonin Re-uptake Inhibitors (SSRIs), of which the best known was *Prozac*. The hypothesis of a neural basis of depression and the mechanisms of these drugs was almost certainly incorrect. Further, the argument about their selectivity for depression was soon abandoned, as they became prescribed for anxiety, social anxiety and other disorders. Currently, we see increasing interest in methods like deep brain stimulation, transcranial magnetic intervention and other electrical and magnetic techniques that go straight to the brain.

## Did the rapid development of the neurosciences in the nineties help to diagnose and treat psychiatric conditions more precisely?

This was certainly the hope of those who have supported the spectacular recent growth of neuroscientific research. That a growing 'molecular' understanding of brain mechanisms wouldn't just cast light on the nature

of mental processes, but would identify the specific neural bases of psychiatric problems. Some hoped that each symptom had a precise neurobiological basis that could be identified to aid precise diagnosis and guide a therapy that would hit those symptoms without all the adverse effects associated with the older psychiatric drugs. That hope spawned a great investment in the development of drugs for psychotic disorders.

The jury is still out whether or not this will be a successful pathway to follow in the medium to long term. It has not proved particularly successful in the short term. There is still a very big translational gap between

the advances at the neurobiological level and our capacity to intervene therapeutically in the clinic. And as for diagnosis, it remains the case that there are no generally accepted and validated biomarkers for any psychiatric condition that can be used clinically.

## Which field of neuroscience do you think will receive particular attention in the coming years?

One major issue – not just in advanced industrial societies but also in countries such as China or India – is the question of dementia and Alzheimer's disease. Obviously as the population ages, the incidence of these disorders increases. The extent to which we are able to characterize these disorders at a neurobiological level in living individuals – that is to differentiate between early Alzheimer's and normal aging – is a matter of dispute. There are some who argue that increasingly that is possible. *Simon Lovestone* speaking at the conference is one of those.

## What is your personal highlight of the upcoming conference?

I'm very pleased that we have a talk describing the patients perspective from *Donna Franceschild*, who is a writer and dramatist for TV and radio and has been active in patients' movements in psychiatry. In the

past, the last persons who were listened to about the value of their treatment were the users themselves. I think the emergence of the patient's voice, the recognition that they have the right to a say in how psychiatry develops, is applied and evaluated, is as major an advance for psychiatry as developments in neuroscience.

EMBO EMBL

making sense of **MENTAL ILLNESS**

biology, medicine & society

12th joint EMBO | EMBL conference on Science & Society **4-5 November 2011**

EMBL Advanced Training Centre | Heidelberg | Germany

**Speakers, chairs, & panellists:**

Friday | 4 November

**Nikolas Rose**  
Keynote speaker

**Topics**

**Impact and definition of mental illness**

**The biology of mental illness**

STUDENTS 20 Euro  
REGISTRATION FEE 40 Euro  
HIGH SCHOOL STUDENTS free entrance

Saturday | 5 November

**Topics**

**Pills, sofas and surgery – ways of treatment**

**Society and mental illness**

Dusan **Bartsch** DE  
Mathias **Berger** DE  
Donna **Franceschild** UK  
Cornelius **Gross** IT  
Tim **Kendall** UK  
David J. **Kupfer** US  
Simon **Lovestone** UK  
Helen S. **Mayberg** US  
Andreas **Meyer-Lindenberg** DE  
Geraint **Rees** UK  
Nikolas **Rose** UK  
Steven **Rose** UK  
Wulf **Rössler** CH  
Sir Michael **Rutter** UK  
Luca **Santarelli** CH  
Joseph A. **Sergeant** NL  
Hans-Ulrich **Wittchen** DE

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[www.embo.org/science-society-conference-2011](http://www.embo.org/science-society-conference-2011)

Organizing committee:  
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Nikolas Rose BIOS | London School of Hygiene & Tropical Medicine | UK  
Alexandra Bredisch EMBO Science & Society Programme  
Holger Breitbaupt EMBO reports  
Gerlind Wallon EMBO Deputy Director  
Halldor Stefansson EMBL Science & Society Programme

# EMBO Gold Medalist for 2011

Groundbreaking research on DNA repair, genome integrity and cancer



## Simon Boulton's research highlights include:

→ Discovering the gene *RTEL1* as an anti-recombinase that impacts on genome stability and cancer and counteracts toxic recombination, which is also required in meiosis to execute non-crossover repair.

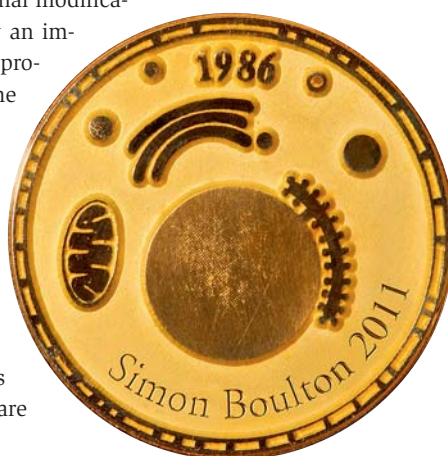
→ Discovering the PBZ motif and establishing that ALC1 (Amplified in Liver Cancer 1) is a poly(ADP-ribose)-activated chromatin-remodelling enzyme required for DNA repair. Poly(ADP-ribosylation) (PAR) is a post-translational modification of proteins that play an important role in mediating protein interactions and the recruitment of specific protein targets. These results provided new insights into the mechanisms by which PAR regulates DNA repair.

→ Discovering that the Fanconi Anaemia proteins FANCM and FAAP24 are

required for checkpoint-kinase signalling (ATR) in response to DNA damage and establishing that DNA repair defects of Fanconi Anaemia cells can be suppressed by blocking error prone repair by non-homologous end joining.

For more on this year's award winner see the press release at:

[www.embo.org/news/press-releases-2011/embo-gold-medal-2011-awarded-to-simon-boulton.html](http://www.embo.org/news/press-releases-2011/embo-gold-medal-2011-awarded-to-simon-boulton.html)



▶ *Simon Boulton* of Cancer Research UK's London Research Institute, is the winner of the 2011 EMBO Gold Medal. The 38-year-old received the award in recognition of his groundbreaking research on DNA repair mechanisms. The election committee was particularly impressed by his pioneering role in establishing the nematode worm, *C. elegans*, as a model system to study genome instability.

## Structure and Dynamics of Protein Networks

EMBO | EMBL Symposium

13–16 October 2011 | Heidelberg | Germany

EMBL Advanced Training Centre

### SPEAKERS

Patrick Aloy  
Chris Bakal  
Philippe Bastiaens  
Martin Beck  
John Briggs  
Iain Cheeseman  
Suzanne Gaudet  
Tom Kirchhausen  
Tanja Kortemme  
Ben Lehner

François Nédélec  
Garry Nolan  
Lucas Pelkmans  
Natasa Przulj  
Aurelien Roux  
Philip Selenko  
Jussi Taipale  
Eva Wolf  
Peter Wright  
Marino Zerial

### ORGANIZERS

Anne-Claude Gavin  
Marko Kaksonen  
Giulio Superti-Furga

Additional speakers will be selected from abstracts.

[www.embo-embl-symposia.org](http://www.embo-embl-symposia.org)

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ABSTRACT SUBMISSION  
DEADLINE 14 AUGUST

REGISTRATION  
DEADLINE 1 SEPTEMBER

## EMBO Events

JULY 2011–APRIL 2012

## PRACTICAL COURSES

**Bioinformatics and comparative genome analyses**  
FR-Paris, 27 June–9 July 2011

**High-throughput methods for protein production and crystallization**  
FR-Marseille, 4–13 July 2011

**Marine animal models in evolution and development**  
SE-Fiskebäckskil, 4–14 July 2011

**Developmental neurobiology: From worms to mammals**  
UK-London, 8–22 July 2011

**Single-molecule nanomanipulation and analysis of protein–DNA interactions**  
FR-Paris, 10–24 July 2011

**Multi-level modelling of morphogenesis**  
UK-Norwich, 17–29 July 2011

**Structure, dynamics and function of biological macromolecules by solution NMR**  
DE-Garching, 29 July–5 August 2011

**Computational biology: Genomes, cells & systems**  
IS-Reykjavik, 6–13 August 2011

**Studying protein–protein interactions by advanced light microscopy and spectroscopy**  
HU-Debrecen, 16–22 August 2011

**Image processing for cryo-electron microscopy**  
UK-London, 30 August–9 September 2011

**Two-photon imaging of brain circuits**  
DE-Munich, 3–10 September 2011

**Protein bioinformatics tools Focus on regulatory proteins: Sequences, structures, interactions, networks**  
DE-Heidelberg, 25 September–30 September 2011

**Current methods in cell biology**  
DE-Heidelberg, 29 September–7 October 2011

**Modern biophysical methods for protein–ligand interactions**  
FI-Oulu, 17–21 October 2011

**Analysis of high-throughput sequencing data**  
UK-Hinxton, 23–29 October 2011

## PRACTICAL COURSES (cont.)

**Metagenomics: From the bench to data analysis**  
DE-Heidelberg, 23–29 October 2011

**Protein–protein and protein–nucleic acid cross-linking and mass spectrometry**  
DE-Göttingen, 23–29 October 2011

**Imaging infection: From single molecules to animals**  
ZA-Pretoria, 2–13 November 2011

**Computational structural biology: From data to structure to function**  
UK-Hinxton, 14–18 November 2011

**Mass spectrometry and proteomics**  
DK-Odense, 18–25 April 2012

## WORKSHOPS

**50 years of X-inactivation research**  
UK-Oxford, 20–24 July 2011

**Exploring the logic of the cell cycle**  
FR-Montpellier, 2–5 September 2011

**Retinoids 2011**  
FR-Ilkkirch, 22–24 September 2011

**Chromosome structure, damage and repair**  
GR-Cape Sounio, 25–28 September 2011

**Histone variants and genome regulation**  
FR-Ilkkirch, 12–14 October 2011

**Intracellular proteolysis and cancer**  
ES-Valencia, 26–28 October 2011

**Mechanisms of nucleocytoplasmic trafficking**  
IL-Ma'ale Hachamisha, 6–11 November 2011

**Molecular insights for innovative therapies**  
DE-Heidelberg, 1–3 December 2011

**Programmed cell death in model organisms**  
IL-Ein Gedi, 19–23 February 2012

**Microbial sulfur metabolism**  
NL-Noordwijkerhout, 15–18 April 2012

## CONFERENCE SERIES

**EUROPHOSPHATASE 2011: Protein phosphatases from molecules to networks**  
AT-Baden bei Wien, 18–23 July 2011

## CONFERENCE SERIES (cont.)

**Intracellular RNA transport and localized translation**  
IT-Barga, 7–12 August 2011

**Protein synthesis and translational control**  
DE-Heidelberg, 7–11 September 2011

**Lymphocyte signalling: Translating membrane signals into differentiation programmes**  
IT-Pontignano (Siena), 10–14 September 2011

**Nuclear receptors: From molecular mechanism to health and disease**  
ES-Sitges (Barcelona), 16–20 September 2011

**Meiosis**  
IT-Capaccio (Paestum), 17–21 September 2011

**Ubiquitin and ubiquitin-like modifiers: From functional modules to systems biology**  
HR-Cavtat (Dubrovnik), 21–25 September 2011

**Dynamic endosomes: Mechanisms controlling endocytosis**  
GR-Kato Galatas (Crete), 24–29 September 2011

**The assembly and function of neuronal circuits**  
CH-Ascona, 25–30 September 2011

**Host genetics control of infectious diseases**  
FR-Paris, 28–30 September 2011

**Nuclear structure and dynamics**  
FR-L'Isle sur la Sorgue, 28 September–2 October 2011

**Centrosomes and spindle pole bodies**  
ES-Barcelona, 2–6 October 2011

**Comparative genomics of eukaryotic microorganisms: Understanding the complexity of diversity**  
ES-Sant Feliu de Guixols, 15–20 October 2011

**Autophagy in health and disease**  
IL-Ma'ale Hachamisha, 30 October–4 November 2011

**Visualizing biological data (VIZBI 2012)**  
DE-Heidelberg, 6–8 March 2012

## ESF-EMBO SYMPOSIA

**Glutathione and related thiols in living cells**  
ES-Sant Feliu de Guixols, 4–9 September 2011

## ESF-EMBO SYMPOSIA (cont.)

**Epigenetics in context: From ecology to evolution**  
ES-Sant Feliu de Guixols, 18–23 September 2011

**Synthetic biology of antibiotic production**  
ES-Sant Feliu de Guixols, 2–7 October 2011

## EMBO | EMBL SYMPOSIA

**Cancer genomics**  
DE-Heidelberg, 17–19 September 2011

**Structure and dynamics of protein networks**  
DE-Heidelberg, 13–16 October 2011

**Immunology of host–pathogen interactions**  
DE-Heidelberg, 19–22 May 2012

## EMBO | FEBS LECTURE COURSES

**Biomembrane dynamics: From molecules to cells**  
FR-Cargèse, 21–29 June 2011

**Actin-based motility: From molecules to model organisms**  
IT-Stresa (Lake Maggiore), 29 October–2 November 2011

## EMBO GLOBAL EXCHANGE LECTURE COURSES

**Next generation sequencing for Africa**  
KE-Nairobi, 5–10 September 2011

**Logic of regulatory circuits**  
TW-Taipei, 12–16 January 2012

**Introduction to synthetic biology**  
AR-Buenos Aires, 16–22 April 2012

## EMBO | EMBL SYMPOSIA

**Cancer genomics**  
DE-Heidelberg, 17–19 September 2011

**Structure and dynamics of protein networks**  
DE-Heidelberg, 13–16 October 2011

**Immunology of host–pathogen interactions**  
DE-Heidelberg, 19–21 May 2012

**Complex life of mRNA**  
DE-Heidelberg, 7–10 October 2012

**Germline-immortality through totipotency**  
DE-Heidelberg, 13–16 October 2012

## OTHER EVENTS

**EMBL | EMBO Science & Society Summer School The human animal: Scientific, social and moral perspectives**  
DE-Heidelberg, 1–6 August 2011

**The EMBO Meeting 2011 – Advancing the life sciences**  
AT-Vienna, 10–13 September 2011

**EMBO Members' Workshop**  
DE-Heidelberg, 26–28 October 2011

**EMBO | EMBL Science and Society Conference Making sense of mental illness: Biology, medicine & society**  
DE-Heidelberg, 4–5 November 2011

**EMBO Molecular Medicine Conference Molecular insights for innovative therapies**  
DE-Heidelberg, 1–3 December 2011

For more information and a list of all courses, workshops, conferences and symposia please go to [events.embo.org](http://events.embo.org).

Forthcoming application deadlines for organizers to apply for EMBO funds:

1 August

EMBO Courses &amp; Workshops

1 September

EMBO Plenary Lectures

# “I was fortunate to go down my own research route”



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Chemistry professor *Carol V. Robinson* has been recognized for her pioneering work in the development of mass spectrometry with this year's FEBS | EMBO Women in Science Award. Carol was the first woman to become a professor of Chemistry in Cambridge in 2001, and her early career was marked by an eight-year break to raise her three children. In *EMBOencounters* she talks about her unusual career path and today's spirit of female researchers in the UK.

*Carol, the award committee praised you as “the world's leading researcher in a male-dominated field”. Why do you think other women shy away from mass spectrometry?*

Certainly more women work in mass spectrometry nowadays than when I was starting my career. I used to be the only woman at national and international meetings in the seventies. But today it is much more equal – particularly since mass spectrometry is applied more and more to the biological sciences.

*What fascinates you about this field of research?*

Initially it was the technical aspect that I really liked. Back then, it was quite challenging to get spectra. Most days the instrument would break down, lose vacuum or the filament would break. Today it is easier to get spectra, but I find the results more interesting, particularly since it is still often unpredictable. You rarely know what you are going to see when you put a very large complex into a mass spectrometer. Is it going to hold together or fall apart and if so,

in what directions? I still get results that surprise me even though I've been doing it for so long.

*But wouldn't that apply to any other research?*

I don't think it is quite so true with other techniques. In more established techniques I think you can predict to some extent how something is

going to behave, whereas the gas phase is still a very new phase for studying very large complexes. You can't always be sure how or if it is going to work.

*Your scientific career took off quite late after you left school at sixteen.*

*Why did you leave at such a young age?*

My school wasn't particularly academic. Pupils were asked to learn shorthand and typing, needlework and cookery. Further education was not really promoted and I wasn't encouraged to go to university. So I became a research technician in a mass spectrometry lab. I liked the challenge from the very start.

*From research technician to postdoc is a long way...*

I was fortunate that my supervisors supported me through my part-time education. After my day's work I attended college for one day and two evenings a week. It was tiring but after seven years I got a degree in chemistry and went to Cambridge to do my PhD.

*Then you took an eight-year career break to raise your children. How was your decision perceived by your colleagues and friends at that time?*

I think some were envious because I really enjoyed spending time with my children. Other people said that I would be really bored. A few colleagues warned me that I would not be able to return. So I was very happy when I found someone who agreed to take me back. All in all, I enjoyed that break and look back on it as a very special time.

*How do you think it would be seen now?*

It would probably be considered that you were out of the field for too long. On the other hand it is much easier to keep in touch. In my time you would have had to go to the lab every day to be part of the research team. Nowadays you could stay home for maternity leave and be able to log on and talk to your team when your baby is asleep.

*So has the perception of society towards female scientists taking time out become more negative?*

I think it really has become more negative and it is often perceived that you are not a serious scientist if you take this path.

*How would you describe the spirit of female researchers in the UK today?*

Many of them say it is very hard to balance things. I also see a lot of young women struggle with the pressures of papers, grants and families. I can understand what it is like. When my children were little, I worked very hard early in the morning and then again when they had gone to bed. It was quite a long day.

*What kept you on your toes?*

I wanted to know the answers to questions I was working on at the time. And I was determined to succeed because I had such a long time out. At the age of 38 I was a high-risk person for people to employ. I wanted my colleagues to think they had not made a mistake. When I got the Royal Society Fellowship, I was fortunate because I could show my independence and go down my own research route.

*How do you support young parents in your lab?*

Generally I have quite a lot of young parents working for me. They may not be in all the time, especially if the child is sick, but they work very hard. I've never been obsessed with people's working hours. It is one of the few careers where you can be very flexible.

*What job would you be in today if your academic career had not taken off?*

I always said that if I didn't succeed in what I was doing I would make jewellery. Not expensive jewellery, but fashion jewellery. I used to do it as a hobby. Thankfully I haven't had to fall back on that option just yet!

# EMBO Scientific Publications | Editor Picks

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

#### Modulating F-actin organization induces organ growth by affecting the Hippo pathway

Sansores-Garcia L, Bossuyt W, Wada K-I, Yonemura S, Tao C, Sasaki H and Halder G  
doi:10.1038/emboj.2011.157

#### Galactose-modified iNKT cell agonists stabilized by an induced fit of CD1d prevent tumour metastasis

Aspeshlagh S, Li Y, Dawen Yu E, Pauwels N, Trappeniers M, Girardi E, Decruy T, Van Beneden K, Venken K, Drennan M, Leybaert L, Wang J, Franck RW, Van Calenberg S, Zajonc DM and Elewaut D  
doi:10.1038/emboj.2011.145

#### Histone variant macroH2A confers resistance to nuclear reprogramming

Pasque V, Gillich A, Garrett N and Gurdon JB  
doi:10.1038/emboj.2011.144

#### Extracellular phosphorylation of the amyloid $\beta$ -peptide promotes formation of toxic aggregates during the pathogenesis of Alzheimer's disease

Kumar S, Rezaei-Ghaleh N, Terwel D, Thal DR, Richard M, Hoch M, McDonald JM, Wüllner U, Glebov K, Heneka MT, Walsh DM, Zweckstetter M and Walter J  
doi:10.1038/emboj.2011.138

#### The CW domain, a new histone recognition module in chromatin proteins

Hoppmann V, Thorstensen T, Kristiansen PE, Veiseth SV, Rahman MA, Finne K, Aalen RB and Aasland R  
doi:10.1038/emboj.2011.108

#### Mitochondria regulate autophagy by conserved signalling pathways

Graef M and Nunnari J  
doi:10.1038/emboj.2011.104

## EMBO reports

### SCIENTIFIC REPORTS

#### MiD49 and MiD51, new components of the mitochondrial fission machinery

Palmer CS, Osellame LD, Laine D, Koutsopoulos OS, Frazier AE, Ryan MT  
doi:10.1038/embor.2011.54

#### Ataxin-1 and Brother of ataxin-1 are components of the Notch signalling pathway

Tong X, Gui H, Jin F, Heck BW, Lin P, Ma J, Fondell JD, Tsai CC  
doi:10.1038/embor.2011.49

### REVIEWS

#### Tracking adult stem cells

Snippert HJ, Clevers H  
doi:10.1038/embor.2010.216

#### Regenerating the epigenome

Barrero MJ, Belmonte JCI  
doi:10.1038/embor.2011.10

### SCIENCE & SOCIETY

#### Exercising ghostwriting...

Bosch X  
doi:10.1038/embor.2011.87

#### Reading the tea leaves of Congress

Suran M  
doi:10.1038/embor.2011.59

## molecular systems biology

### RESEARCH ARTICLES

#### RNAi screen of *Salmonella* invasion shows role of COPI in membrane targeting of cholesterol and Cdc42.

Misselwitz B, Dilling S, Vonaesch P, Sacher R, Snijder B, Schlumberger M, Rout S, Stark M, von Mering C, Pelkmans L, Hardt WD.  
Mol Syst Biol. 7:474

#### Dynamic transcriptome analysis measures rates of mRNA synthesis and decay in yeast.

Miller C, Schwalb B, Maier K, Schulz D, Dümcke S, Zacher B, Mayer A, Sydow J, Marciniowski L, Dölken L, Martin DE, Tresch A, Cramer P.  
Mol Syst Biol. 7:458.

#### Self-organized partitioning of dynamically localized proteins in bacterial cell division.

Di Ventura B, Sourjik V.  
Mol Syst Biol. 7:457

#### Analysis of multiple compound-protein interactions reveals novel bioactive molecules.

Yabuuchi H, Nijima S, Takematsu H, Ida T, Hirokawa T, Hara T, Ogawa T, Minowa Y, Tsujimoto G, Okuno Y.  
Mol Syst Biol. 7:472

### REVIEWS

#### Social interaction in synthetic and natural microbial communities.

Xavier JB.  
Mol Syst Biol. 7:483.

#### Determinants of translation efficiency and accuracy.

Gingold H, Pilpel Y.  
Mol Syst Biol. 7:481.

#### A comprehensive map of the mTOR signaling network.

Caron E, Ghosh S, Matsuoka Y, Ashton-Beaucage D, Therrien M, Lemieux S, Perreault C, Roux PP, Kitano H.  
Mol Syst Biol. 6:453

## EMBO Molecular Medicine

### RESEARCH ARTICLES

#### ZNF703 is a common Luminal B breast cancer oncogene that differentially regulates luminal and basal progenitors in human mammary epithelium.

Holland DG, Burleigh A, Git A, Goldgraben MA, Perez-Mancera PA, Chin SF, Hurtado A, Bruna A, Ali HR, Greenwood W, Dunning MJ, Samarajiva S, Menon S, Rueda OM, Lynch AG, McKinney S, Ellis IO, Eaves CJ, Carroll JS, Curtis C, Aparicio S, Caldas C.  
doi: 10.1002/emmm.201100122..

#### ZNF703 gene amplification at 8p12 specifies luminal B breast cancer.

Sircoulomb F, Nicolas N, Ferrari A, Finetti P, Bekhouche I, Rousselet E, Lonigro A, Adélaïde J, Baudelet E, Esteyriès S, Wicinski J, Audebert S, Charafe-Jauffret E, Jacquemier J, Lopez M, Borg JP, Sotiriou C, Popovici C, Bertucci F, Birnbaum D, Chaffanet M, Ginestier C.  
doi: 10.1002/emmm.201100121

#### Staphylococcus aureus phenotype switching: an effective bacterial strategy to escape host immune response and establish a chronic infection.

Tuchscherer L, Medina E, Hussain M, Völker W, Heitmann V, Niemann S, Holzinger D, Roth J, Proctor RA, Becker K, Peters G, Löffler B.  
doi: 10.1002/emmm.20100011

#### A CAG repeat polymorphism of KCNN3 predicts SK3 channel function and cognitive performance in schizophrenia.

Grube S, Gerchen MF, Adamcio B, Pardo LA, Martin S, Malzahn D, Papiol S, Begemann M, Ribbe K, Friedrichs H, Radyushkin KA, Müller M, Bensele F, Riggert J, Falkai P, Bickelböller H, Nave KA, Brose N, Stühmer W, Ehrenreich H.  
doi: 10.1002/emmm.201100135

#### IL-28A (IFN- $\lambda$ 2) modulates lung DC function to promote Th1 immune skewing and suppress allergic airway disease.

Koltsida O, Hausding M, Stavropoulos A, Koch S, Tzelepis G, Ubel C, Kotenko SV, Sideras P, Lehr HA, Tepe M, Klucher KM, Doyle SE, Neurath MF, Finotto S, Andreakos E.  
doi: 10.1002/emmm.201100142

## Next issue

The next *EMBOencounters* issue – Autumn 2011 – will be dispatched in October 2011. Please send your suggestions, contributions and news to: [communications@embo.org](mailto:communications@embo.org) by 16 September 2011.

**Editor** Yvonne Kaul

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**Web version** Sabine Rehberger-Schneider

**E-newsletter** Sandra Krahl, Katja Linssen



Schönbrunn Palace: a former imperial 1400-room Rococo summer residence in Vienna

## Things to do in Vienna

*To help The EMBO Meeting participants fill their free time in Vienna, we polled the local EMBO community and put together a list of their favourite spots for dining, shopping & culture.*

**Giulio Superti-Furga, EMBO Member, Director of the Center for Molecular Medicine of the Austrian Academy of Sciences:**

The *Museumsquartier*, a buzzing 60,000 square metre cultural area that has been extensively renovated in the last decade, is home to many museums, art galleries but also bars in a stimulating setting.

The *Naschmarkt* is the most popular market in Vienna with 1.5 kilometres of stands and shops selling products from all over the world.

To experience the summer feeling of Vienna, go for dinner or drinks along the Donaukanal – part of the Danube river that crosses the city. Have a cocktail at the famous *Tel Aviv*, a sandy beach for chilling out along

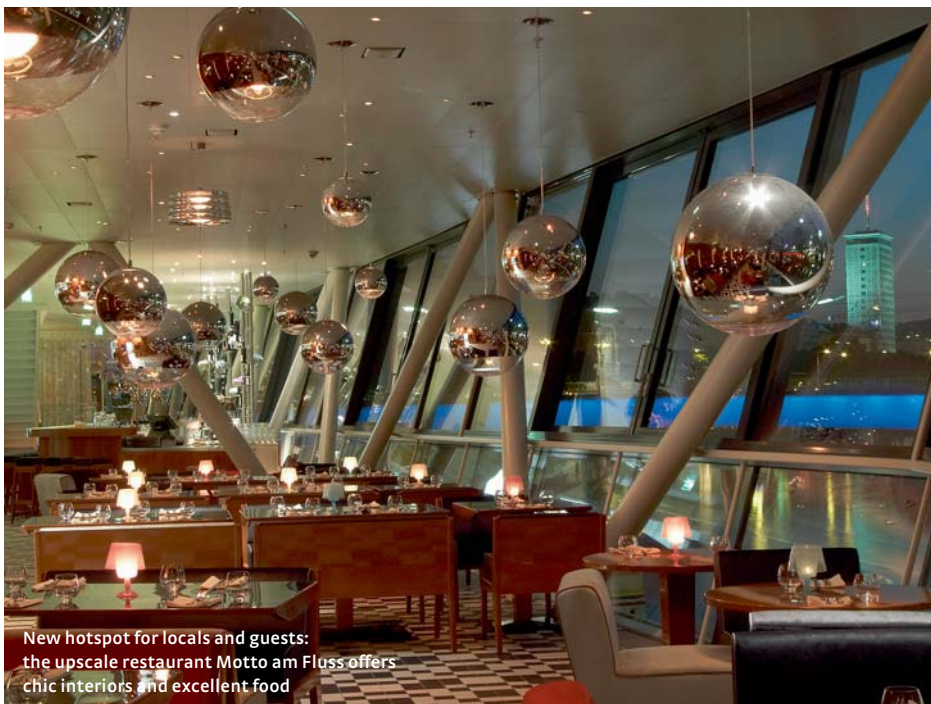
the canal. The restaurant *Motto am Fluss* with its impressive building overlooking the canal offers excellent food.

What every visitor to Vienna should not miss, is a visit to one of the *Heurigen*, typical Austrian wine taverns that serve only their own wine. The most famous include *Sirbu* and the traditional *10er Marie* dating from 1740 and situated in the old city district Alt-Ottakring.

For people interested in dancing, *Volksgarten* offers a relaxed atmosphere with a nice garden for refreshments. For a more up-market option go to *Passage*, a futuristic nightclub located in an old underground passage.

**Nina Corsini, EMBO Fellow, postdoc at the Institute of Molecular Biotechnology:**

The *Museum of Natural History* in Vienna has an amazing collection of minerals, butterflies, stuffed animals, sea creatures, gem stones and corals, some of which were brought back to Vienna by adventurers almost 250 years ago. You can spend a whole rainy Sunday there exploring the exhibit and feeling like an adventurer yourself. My favourite piece is a hideous monster fish that, as it turns out, never existed, but was actually created → →



New hotspot for locals and guests: the upscale restaurant *Motto am Fluss* offers chic interiors and excellent food



Viennese by choice:  
Giulio Superti-Furga



The Danube canal runs through the heart of Vienna

© Marianne Greber



Summer in the city

© Marianne Greber



Nina Cortesi relaxing in the Palmenhaus Café

→ → from several types of fish skin. Once you get tired from all the buzz, don't forget to have a Wiener mélange at the beautiful café on the top floor – before you come back on Monday evening for *The EMBO Meeting* conference party.

If there is a bit of sun in Vienna, you'll be able to catch it in the outdoor part of the *Palmenhaus Café*, located in a former greenhouse at the Burggarten. Grab a coffee or a light meal (they offer very nice grilled fish), enjoy the beautiful view of the Burggarten or just touch up your sun tan.

**Javier Martinez, EMBO Young Investigator, group leader at the Institute of Molecular Biotechnology:**

Vienna has some fabulous museums. Probably the most famous is *Albertina*, situated right in front of the *Vienna Opera*. The *Upper Belvedere* hosts the world's largest collection of *Gustav Klimt* and some of *Egon Schiele*'s most famous paintings.

The gardens around *Schönbrunn Palace* are very nice to walk around and the *Zoo in Vienna* has a great new house for orangutans.

*Restaurant Seidl* in Ungargasse 63 is excellent for Viennese cuisine. It offers the best schnitzel in town for reasonable prices and has a great wine list. For those who prefer a more exotic menu, I recommend *maki sushi* at *Kiang*, Sechskrügelgasse 2.



Javier Martinez (right) with his daughter Julia in his favourite place for the original Viennese schnitzel



# Ice and anther



The winners of *The EMBO Journal Cover Contest 2011* are *Heiti Paves* for the best scientific cover image and *Dieter Lampl* in the category best non-scientific cover image. A confocal image of an *Arabidopsis thaliana* anther filled with pollen grains received the highest scores from the jury in the scientific section and was showcased on the front cover of *The EMBO Journal* issue 30/09. The impressive Blue Ice of the glacier Perito Moreno in Patagonia, which headed the non-scientific list, decorated the front cover of issue 30/08.

This year, more than 3,000 images were submitted to this annual amateur contest. A gallery of the winning and the shortlisted pictures can be found at: [http://covercontest.embo.org/Winners\\_2011.html](http://covercontest.embo.org/Winners_2011.html)

## EMBO Scientific Publications | Poster Prize competition

*Congratulations to the following winners of competitions held at recent meetings:*

### Luca Mazzarella

European Institute of Oncology,  
Milan, Italy

**Stimulation of the insulin/IGF1 pathway inhibits induction of Foxp3<sup>+</sup> Tregs**

Presented at the EMBO Workshop, *Immunology and Metabolism* Marseille, France  
13–15 January, 2011

### Martin Lehmann

University of Geneva, Switzerland

**Quantitative multicolour super-resolution microscopy reveals tether in HIV-1 interaction**

Presented at the EMBO | EMBL Symposium, *Seeing is Believing – Imaging the Processes of Life* Heidelberg, Germany  
17–20 March, 2011

### Inês Pimenta de Castro

MRC-Toxicology Unit, Leicester, UK

**Genetic analysis of mitochondrial protein misfolding in *Drosophila melanogaster***

Presented at the EMBO Molecular Medicine Workshop 2011, *Cell Death & Disease* Obergurgl, Austria  
10–14 March, 2011

### Hironobu Fujiwara

Epithelial Cell Biology Laboratory, Cancer Research UK, Cambridge, UK

**Role of basement membrane heterogeneity in establishing unique microenvironmental niches in skin**

Presented at the EMBO Conference Series, *Advances in Stem Cell Research* Paris, France  
6–8 April, 2011

### Mattia Quattrocchi

Interdepartmental Stem Cell Institute, Leuven, Belgium

**Myogenic-biased commitment in pericyte-derived iPSCs**

Presented at the EMBO Conference Series, *Advances in Stem Cell Research* Paris, France  
6–8 April, 2011

### Leila Rieder

Brown University, Providence, Rhode Island, USA

**A tale of two (or three or four) structures: in vivo demonstration of long-range secondary and tertiary RNA structures directing editing**

Presented at the EMBO Workshop, *Chromatin Structure, Organization and Dynamics* Prague, Czech Republic  
9–13 April, 2011

### Anchal Chandra

Max Planck Institute for Molecular Physiology, Dortmund, Germany

**The GDI-like solubilizing factor PDEdelta sustains the spatial organization and signaling of RAS-family proteins**

Presented at the EMBO Conference Series, *SPATIAL 2011 – Systems Dynamics of Intracellular Communication* Engelberg, Switzerland  
15–19 May, 2011

### EVENTS FROM THE EMBO COMMUNITY

EMBO Member **Gustav Ammerer** and EMBO/HHMI scientist **Lumir Krejčí** are organizers of the **Mendel Lectures** – a series of lectures held in the Mendel Museum in Brno, Czech Republic.

The list of all talks planned for 2011 and 2012 is available at <http://mlectures.ic.cz>

From **9–16 September 2011**, **Biocenter of the University of Basel** will celebrate its **40th anniversary** with a series of events for politicians, scientists and the general public. The events include a two-day scientific symposium organized by EMBO Member **Erich Nigg**, Director of the Biocenter, and his team.

More information at [www.biocentrum.unibas.ch/40/40jahre40years.html](http://www.biocentrum.unibas.ch/40/40jahre40years.html)

The **Champalimaud Neuroscience Symposium** to be held from **18–21 September 2011** will bring together researchers from around the world who are interested in solving the puzzle of the brain. The symposium will take place at the Champalimaud Centre for the Unknown in central Lisbon, Portugal. It is co-organized by EMBO Member **Zachary F. Mainen**.

More at <http://symposium.neuro.fchampalimaud.org/>

EMBO Fellow **Isabel Varela-Nieto** is co-organizing a series of Science for Society events under the umbrella of the Spanish Society for Biochemistry and Molecular Biology (SEBBM) – one of the largest scientific associations in the country. **The Magic of Proteins** will be held on **23 September** during the Researchers' Night in Madrid. Further activities include participation in Madrid's Science Fair with a meeting on *Artificial intelligence: science fiction or truth?*

More at [www.sebbm.es](http://www.sebbm.es)

# Royal opening for new plant laboratory

£82 million facility headed by EMBO Member Elliot Meyerowitz



© Nigel Luckhurst

◀ Royal presence at the launch of a new research facility is a rare honour that was granted to Cambridge University in April this year, when *Queen Elisabeth II* came to the opening of The Sainsbury Laboratory. Her Majesty was received by EMBO Member *Elliot Meyerowitz* (pictured left), the inaugural director of this state-of-the-art plant sciences lab.

The facility was made possible by the £82 million grant from the Gatsby Charitable Foundation. It will focus on addressing some of the major environmental problems, such as the increasing strain on the world's food supplies. The building will also be home to the University Herbarium – a unique collection of over one million pressed and dried plant specimens from all over the world, including those collected by *Charles Darwin* on the *Beagle* voyage.

Late abstracts  
close 27 July

Online registration  
closes 21 August

## Conference chairs

Pascale **Cossart**  
Barry **Dickson**  
Jane **Langdale**

## Special lectures

Mark **Pagel**  
Giacomo **Rizzolatti**

## Keynote lectures

Richard **Axel**  
Susan **Lindquist**  
Louis-Jeantet Prize  
for Medicine winners

## Speakers include

David **Anderson**  
Richard **Axel**  
Cori **Bargmann**  
Bonnie **Bassler**  
Jeffrey **Bennetzen**  
Evan **Eichler**  
Florian **Engert**  
Brett **Finlay**  
Susan **Lindquist**  
Edvard **Moser**  
Paul **Rainey**  
Giacomo **Rizzolatti**  
Paul **Schulze-Lefert**  
Lucy **Shapiro**  
Michael **Stratton**  
Eric **Wieschaus**

[www.the-embo-meeting.org](http://www.the-embo-meeting.org)  
[the.embo.meeting@embo.org](mailto:the.embo.meeting@embo.org)

the 3rd  
**EMBO**  
meeting  
advancing the life sciences

**2011**  
**VIENNA**  
10–13 September

**21** concurrent  
sessions covering  
the entire range  
of the molecular  
life sciences

see website

## Better together

*Biocenter Finland – developing cost-efficient technology services at the national level*

At first glance, Finland does not appear so welcoming to foreign scientists. “We are a restrictive country,” says *Eero Vuorio*, Finnish delegate to the EMBC, the intergovernmental funding body of EMBO. “The average temperature is below that of a refrigerator; the language is not easy.” Still, the Nordic republic recruits skilled life scientists from all over the world to its universities. Most of them head for Finland’s capital city, Helsinki. Attracting students and researchers from abroad to peripheral cities is also one of the goals of Biocenter Finland ([www.biocenter.fi](http://www.biocenter.fi)) – a new umbrella organization of six institutes based at various Finnish universities.

The idea is as simple as it is ambitious: each of the six biocenters provides technology services for the benefit of the entire community – in its own area of specialization. The aim is to avoid unnecessary overlaps and invest in the newest technologies and equipment. While the transgenic mouse network is coordinated by the biocenter in Oulu, the Turku biocenter excels in services related to proteomics, and Helsinki is the first address for all interested in next-generation sequencing technology. Other fields across the biocenters include viral gene transfer, cell therapy and bioinformatics. “Users shouldn’t pay more for our services even if they are based 500 kilometres away from Helsinki,” says EMBO Member *Mart Saarma*, one of the project initiators. Geographical balance is key in this large, but extremely sparsely populated country.

This division of tasks was a prerequisite to receive public funding. Last year, the Finnish government transferred 45 million euros to the network for the years 2011 to 2013 – a



Biocenter Finland director Eero Vuorio (left) and one of its founders, Mart Saarma

more than generous investment in the middle of the global financial slump. “We learned the lesson during the severe crisis in the early nineties,” explains Eero, who heads the Biocenter Finland. This time, despite nationwide budget cuts, the government keeps up its support for basic research. Finland spends close to four per cent of its GDP on Research & Development – a high share similar only to countries like Sweden and Israel. It pays off. The life sciences sector in Finland is doing well and, internationally, Finnish researchers score highly in clinical research, with respect to the number of publications and the number of citations.”

Of the total of 45 million euros, 45 per cent was invested into technological equipment, 40 per cent went into hiring staff and the rest of 15 per cent into machine maintenance and subsidies. The networks on genome-wide methods and proteomics received the biggest share, five million euros each.

By strengthening the existing and supporting the emerging technologies, the new virtual institute manages to avoid bottlenecks and prevent long online queues for certain

services. The acquired state-of-the-art instruments also help to increase the standard of services at a national level. Another advantage of coordinating all investments by one umbrella organization instead of six separate institutes is the easy reporting to the ministry. “For the first time, I can give the ministry a comprehensive overview of our activities on just one page,” says Eero. It doesn’t take more than 45 minutes to draft a report on how funding has been used and how much the universities subsidised it. So both Eero and Mart are convinced that this very young project is already a success. The online feedback forms that are submitted by users tell the same story. “The Finns are very direct,” says Eero. “If the users weren’t happy with what we offered them, they would have shared their displeasure with us immediately.”

**EMBO Members who joined the ranks of the Royal Society in the UK and the US National Academy of Sciences this year:**

#### New Royal Society Fellows and Foreign Members:

- Robin Campbell Allshire
- Doreen Cantrell
- Alun Millward Davies
- Steven J. Gamblin
- Joanne Chory  
*Foreign Member*
- Phillip Allen Sharp  
*Foreign Member*

#### New Members and Foreign Associates of the National Academy of Sciences:

- Michael E. Goldberg
- Ira S. Mellman
- Margaret Buckingham  
*Foreign Associate*
- Franz-Ulrich Hartl  
*Foreign Associate*
- Louise N. Johnson  
*Foreign Associate*
- Stephen O’Rahilly  
*Foreign Associate*
- Shinya Yamanaka  
*Foreign Associate*



## Opportunities for medical research in Brisbane, Australia

*Frank Gannon on his first impressions at a new job in the southern hemisphere.*

After my time in EMBO and in Ireland, I moved to the Queensland Institute of Medical Research (QIMR) in Brisbane as its director in the first week in January this year. Brisbane was in the news at that time because of its severe weather, but now it has returned to normal blue skies, mid 20°C and all the buzz of a booming city.

I had some knowledge of Australia and of Brisbane from previous visits, but living here allows a better appreciation. Brisbane is beautifully located on the banks of a river. It is compact and well serviced with the usual transport systems, enriched by a frequent river-based boat shuttle service. It is, for a northern European, like living in a holiday mode; outdoor meals, excellent cafés, active culture centres, diverse cultures, great beaches close by and everywhere the innate Australian friendliness and ease of contact.

Brisbane is striving to be the leading research city in Australia and is investing

heavily in the required infrastructure. QIMR is the largest medical research institute in Australia and is currently undergoing a revitalisation. This is triggered in part by an expansion that provides a new building and will allow the institute to grow from 600 to over 1,000 researchers.

In addition to the usual research infrastructure, we also have specialist containment rooms for insects, GMP level cellular therapy production, expanding imaging facilities and a linkage with a clinical trial unit. We cooperate with the local universities and are located next door to the largest teaching hospital in Brisbane. Translation to the clinic, underpinned by excellent fundamental research, is an important driver of our activities.

QIMR focuses on three major research themes: Cancer, Infectious Diseases and Mental Health/Complex Disorders. These end points are supported by significant skills and commitments in the areas of immunology,

genetics, biology, population health, computational biology, molecular and cell biology.

We are looking for excellent researchers for the current phase of expansion and invite people at any career stage to apply – including those who are well established researchers looking for a fresh adventure. Please contact me at [frank.gannon@qimr.edu.au](mailto:frank.gannon@qimr.edu.au) and learn more about the benefits of working at QIMR in Brisbane at [www.qimr.edu.au](http://www.qimr.edu.au).

BY FRANK GANNON

Director, Queensland Institute of Medical Research

Frank Gannon is a former Executive Director of EMBO from 1994–2007.



# Molecular Therapies

Insights for Innovative

1–3 December 2011 | EMBL Heidelberg | Germany

SPEAKERS

**Kari Alitalo**  
**Stylianos Antonarakis**  
**Karen Avraham**  
**Yann Barrandon**  
**Anne Brunet**

**Peter Carmeliet**  
**Giulio Cossu**  
**Bart de Strooper**  
**Ivan Dikic**  
**Peter Dirks**

**Matthias Hentze**  
**Sakari Kauppinen**  
**Anthony Monaco**  
**Salvador Moncada**  
**Edward Morrisey**

**Manolis Pasparakis**  
**Austin Smith**  
**Giulio Superti-Furga**  
**Christof von Kalle**  
**Christian Weber**

ORGANIZED BY

**EMBO**  
Molecular Medicine  
**Stefanie Dimmeler** CHIEF EDITOR

KEYNOTE LECTURES

**Philippe Sansonetti**  
**Edison Liu**



Additional speakers will be selected from abstracts.

EARLY REGISTRATION  
15 July 2011

ABSTRACT SUBMISSION DEADLINE  
15 October 2011

CONTACT  
[info@embomolmed.org](mailto:info@embomolmed.org)

[www.embomolmed.org/meeting](http://www.embomolmed.org/meeting)

# Barcelona: hub of chromatin research

*The Catalan capital city is the first address for meetings on chromatin & epigenetics*

► These days, Catalan institutes – and many international organizations, including EMBO – head for Barcelona to host their conferences. In the field of chromatin and epigenetics alone, four conferences have taken place in the city of Gaudi during the first half of 2011. One of them was the *Signaling to Chromatin in Differentiation and Cancer*, organized by the Institute of Predictive and Personalized Medicine of Cancer (IMPPC) and held in the medieval setting of the Catalan Academy of Science.

Indeed, Barcelona has a long-standing history in chromatin research. In the early 80's, investigators from Barcelona pioneered the chromatin field by describing the structure of the chromatin fiber. After 20 rather calm years, the renaissance of the field as epigenetics happened to coincide with the Catalan government initiative to boost basic science by creating independent research centers of excellence. Many of these centers have strong programmes in chromatin and epigenetics. As a consequence, the annual meeting of the local chromatin club now counts on more than 30 participating research groups.

So it does not come as a surprise that the directors of the major biomedical institutes are now discussing the possibility of launching a jointly organized series of annual Barcelona Chromatin Conferences. With the

support of the local government, this initiative might become reality as early as next year. *Antoni Castellà*, Secretary for Universities and Research in the Catalan government, called it an “excellent idea”.

by **MARCUS BUSCHBECK** and **HARVEY EVANS**



*Luisa Lente's design showing a nucleosome in Miró style will be used as logo of the future Barcelona Chromatin Conference series*

©Illustration by Luisa Lente for Tilgner et al. and Schwarts et al., Nat Struct Mol Biol 2009

For more information on future & past conferences go to:

[www.imppc.org/conference2011/](http://www.imppc.org/conference2011/)  
[www.crg.es](http://www.crg.es)  
[www.irbbarcelona.org](http://www.irbbarcelona.org)

[www.pebc.cat](http://www.pebc.cat)  
<http://bloccs.iec.cat/scb/category/seccio/biologia-molecular/>

A new **Graduate School** offering research-based Ph.D. degree in biology has been launched at the **Stowers Institute for Medical Research, Kansas City, US**. “We plan to take exceptional students from around the world and train them in interdisciplinary science,” says EMBO Member *Robb Krumlauf*, scientific director at Stowers.

The programme focuses on practical training in an environment built upon cutting-edge investigation in many facets of modern molecular biology. Successful candidates will receive in-depth training in the latest methodologies of modern molecular biology and learn how to create interdisciplinary approaches to interesting biological problems. The first students will enter in September 2012.

More at:

[www.stowers.org/gradschool](http://www.stowers.org/gradschool)

## New programmes for young researchers

The **Centre for Integrative Genomics in Lausanne**, headed by EMBO Member *Nouria Hernandez*, offers new training opportunities for aspiring doctoral students. The **Doctoral Program in Integrative Experimental & Computational Biology** aims to train students in the conceptual, experimental and computational approaches needed for data production and quantitative analysis. Topics offered span the study of molecules, cells, organisms and their environment, behaviour and evolutionary biology. Additional information can be found at:

[www.unil.ch/iecb](http://www.unil.ch/iecb)

**Mitochondria and Cancer** is the topic of the **residential summer school** organized by EMBO Member *Howy Jacobs* and *Laurie S. Kaguni* from the **University of Tampere**. The school will be held at the **Keurusselkä lakeside spa hotel** in a scenic region of central Finland, from **3–10 September 2011**. Programme includes a lecture series by international research leaders, group-study exercises by students and a mini-symposium involving leading Nordic scientists.

**Application deadline is 15 July.**

More information at:

[www.uta.fi/ibt/finmit/summerschool\\_2011.php](http://www.uta.fi/ibt/finmit/summerschool_2011.php)

## AWARDS OF EXCELLENCE

### EMBO Members

#### Ernst Jung Prize

Ernst Jung Foundation for Science and Research  
The 2011 Ernst Jung Medal for Medicine in Gold was awarded to **Michel Lazdunski** for his research in ion channels, which have led to breakthroughs in the fields of physiology, pathology and pharmacology. **Hans C. Clevers** has received the 2011 **Ernst Jung Medical Award** in recognition of his research work in explaining the molecular causes of colon cancer, which is expected to be of benefit for the further development of innovative therapies.

#### G.H.A. Clowes Memorial Award

American Association for Cancer Research (AACR)  
**Yosef Shiloh** received the 51st Annual AACR Clowes Memorial Award for his studies of the cellular DNA damage response and the rare genomic instability syndrome ataxia-telangiectasia (A-T). The winner was granted a 10,000-US dollar-honorarium and delivered a lecture at the AACR 102nd Annual Meeting in Orlando, US, in April this year.  
AACR also recognized the work of **Pier Paolo Pandolfi**, who received the 2011 **Pezcoller Foundation / AACR International Award for Cancer Research** for his outstanding work in the field of cancer genetics and mouse models for cancer. This work has contributed to new therapies for treating cancers.

#### InBev-Baillet Latour Health Prize 2011

InBev-Baillet Latour Fund  
**Jean-Laurent Casanova** was awarded the international InBev-Baillet Latour Health Prize for his pioneering work in the field of "infectious diseases and immunology". Casanova discovered that life-threatening infections of childhood, such as tuberculosis, pneumococcal disease, herpes simplex encephalitis and chronic mucocutaneous candidiasis, may be caused by single-gene inborn errors of immunity. This annual prize, worth 250,000 euros, is the most important science prize being awarded in Belgium.

#### Hooke Medal

British Society of Cell Biology (BSCB)  
**Alex P. Gould** received the 2011 Hooke Medal of the British Society of Cell Biology. The prize is awarded annually to an emerging leader in cell biology who has made an outstanding contribution to this field within the first ten years of establishing his or her own lab. Gould was presented with the medal at the BSCB annual meeting at the University of Kent, UK, in April this year.

#### Canada Gairdner International Award

The Gairdner Foundation  
Both **Jules A. Hoffmann** and **Shizuo Akira** receive this award worth 100,000 US dollars "for groundbreaking discoveries and definition of the family of Toll-like receptors and the array of microbial compounds that they recognize to provide innate resistance to infection".

#### Award for Basic/Translational Research

European Society for Clinical Investigation (ESCI)  
**Caetano Reis e Sousa** won the 2011 ESCI Award for Basic/Translational Research for his groundbreaking contributions to the understanding of innate immune mechanisms and dendritic cell biology, as well as for his active leadership role in biomedical research in Europe. This 10,000-euro-award is given to biomedical investigators below the age of 45 for excellence in clinically oriented basic or translational research.

#### Jeang Retrovirology Prize

Ming K. Jeang Foundation  
**Michael H. Malim** is the recipient of the 2010 M Jeang Retrovirology Prize. The prize, which is awarded annually, and is partly sponsored by the Ming K. Jeang Foundation, recognizes groundbreaking research from retrovirologists aged 45–60. According to the jury, "Professor Malim made key scientific contributions to our understanding of HIV-1 replication, which also illuminated new fundamental biological processes".

## Upcoming deadlines

# 15 August

EMBO  
Long-Term Fellowships

# 15 October

FEBS | EMBO  
Women in Science Award

## A GOOD READ – PUBLICATIONS FROM THE EMBO COMMUNITY

### Research articles

#### **In vivo** imaging of Tregs providing immune privilege to the hematopoietic stem cell niche

Cristina Lo Celso (EMBO Fellow) *et al.*  
*Nature* | 9 June 2011  
doi: 10.1038/nature10160

#### Latent TGF- $\beta$ binding protein 3 identifies a second heart field in zebrafish

Christian Mosimann (EMBO Fellow) *et al.*  
*Nature* | 29 May 2011  
doi: 10.1038/nature10094

#### Photosynthetic electron partitioning between [FeFe]-hydrogenase and ferredoxin:NADP<sup>+</sup>-oxidoreductase (FNR) enzymes in vitro

Iftach Yacoby (EMBO Fellow) *et al.*  
*Proceedings of the National Academy of Sciences* | 23 May 2011  
doi: 10.1073/pnas.1103659108

#### Acetylation-dependent regulation of endothelial Notch signalling by the SIRT1 deacetylase

Holger Gerhardt (EMBO Young Investigator) *et al.*  
*Nature* **473**, 234–238 | 12 May 2011

#### Evolution and metabolic significance of the urea cycle in photosynthetic diatoms

Chris Bowler (EMBO Member) *et al.*  
*Nature* **473**, 203–207 | 2 May 2011

#### CPEB and two poly(A) polymerases control miR-122 stability and p53 mRNA translation

Stephanie Nottrott (EMBO Fellow) *et al.*  
*Nature* **473**, 105–108 | 10 April 2011

#### Functional specificity of local synaptic connections in neocortical networks

Sonja B. Hofer (EMBO Fellow) *et al.*  
*Nature* **473**, 87–91 | 10 April 2011

#### Auxin triggers a genetic switch

Ive De Smet (EMBO Fellow) *et al.*  
*Nature Cell Biology* **13**, 611–615  
10 April 2011

#### Dynamic regulation of 5-hydroxymethylcytosine in the mouse genome during ES cell differentiation

Joana Marques (EMBO Fellow) *et al.*  
*Nature* **473**, 398–402 | 3 April 2011

#### SHARPN forms a linear ubiquitin ligase complex regulating NF- $\kappa$ B activity and apoptosis

Sigrig S. Skanland (EMBO Fellow) *et al.*  
*Nature* **471**, 637–641 | 31 March 2011\*

#### 5-hydroxymethylcytosine in the mammalian zygote is linked with epigenetic reprogramming

Joana Marques (EMBO Fellow) *et al.*  
*Nature Communications* **2**, 241  
15 March 2011

#### Molecular basis of purine-rich RNA recognition by the human SR-like pw

Antoine Cléry (EMBO Fellow) *et al.*  
*Nature Structural & Molecular Biology* **18**, 443–450 | 13 March 2011

#### The structural basis of agonist-induced activation in constitutively active rhodopsin

Jörg Standfuss (EMBO Fellow) *et al.*  
*Nature* **471**, 656–660  
9 March 2011

#### The structural basis for MCM2–7 helicase activation by GINS and Cdc45

Alessandro Costa (EMBO Fellow) *et al.*  
*Nature Structural & Molecular Biology* **18**, 471–477 | 6 March 2011

#### Oct4 kinetics predict cell lineage patterning in the early mammalian embryo

Nicolas Plachta (EMBO Fellow) *et al.*  
*Nature Cell Biology* **13**, 337–337  
1 March 2011

#### The Machado-Joseph disease deubiquitylase ATX-3 couples longevity and proteostasis

Thorsten Hoppe (EMBO Young Investigator) *et al.*  
*Nature Cell Biology* **13**, 273–281  
13 February 2011

#### The molecular basis of sex:

linking yeast to human  
Luca Jovine (EMBO Young Investigator) *et al.*  
*Molecular Biology and Evolution* **31**, January 2011  
doi: 10.1093/molbev/msr026

### Books

#### Bacterial Stress Responses

2nd edition  
Gisela Storz & Regine Hengge (EMBO Member) (eds)  
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