

# EMBL etcetera

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## Plans from the top

With Eric Karsenti vacating the post of Joint Head of the Cell Biology and Biophysics Unit to direct the science on the TARA expedition, Jan Ellenberg has taken the reins on his own. Inside, he talks about his plans for the future of the unit, including its recruitment strategy, the intention to look more at the 'bigger picture' and embrace a more holistic approach, and the move towards closer links with other units, in particular the Developmental and Structural Biology Units.

"It's time to zoom out a bit and start looking at more cellular functions," he says. "The dream of a cell biologist is a microscope that can make an atomic resolution movie of an entire living cell."

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## The official opening of the ATC



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## EMBL Australia launches down under

On Monday 29 March Kim Carr, Australia's Minister for Innovation, Industry, Science and Research, led a special launch of EMBL Australia in Melbourne.

During the day's programme, Senator Carr announced the appointment of Nadia Rosenthal as Scientific Head of EMBL Australia, the establishment of the EMBL Australia PhD programme, and the appointment of Edwina McGill as the first group leader within the Partner Laboratory Network. [More on page 3](#)

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# THE DAY THE ATC OPENED

March 9 dawned bright and clear, much like any other day...



...except for the arrival of ministers, funders and other guests



There was still time for a quick repair to the revolving door...



...and German Minister for Education and Research Annette Schavan



...before Iain kicked off the afternoon of talks, discussions and musical interludes. Speakers included Tim Hunt...

...and the afternoon was rounded off by the grand unveiling of the bronze plaque.



Architect Manfred Bernhardt and benefactor Klaus Tschira ceremoniously handed the ATC keys over to Iain...



After a momentous day, all that remained was to enjoy some canapés and champagne - and the scientific exhibition on EMBL research on the A helix - as the sun went down.



...THE END

## A goodbye to remember

EMBL's new canteen was packed to the rafters with well-wishers wanting to say goodbye to former Administrative Director Bernd-Uwe Jahn at his farewell dinner on 8 March.

In his speech Uwe joked that it was "nothing to do with the free food" that so many of his friends and colleagues past and present had attended. DG Iain Mattaj

and Head of Finance Keith Williamson said a few words to thank Uwe for his nine years of sterling service to EMBL and to wish him a happy retirement, and Iain announced that a newly planted area of the EMBL Heidelberg campus would be designated 'Uwe's Orchard'. Then everyone went to the ATC lobby to watch live band Stage Diva and dance the night away.



Photos: Wolfgang Hübner



Photo: Marietta Schupp

Left: the new canteen had never been so full. Top: Iain and Uwe; above, gifts galore

## EMBL Australia launches down under

On Monday 29 March Kim Carr, Australia's Minister for Innovation, Industry, Science and Research, led a special launch of EMBL Australia in Melbourne.

A joint venture supported by the Australian government and involving the universities of Sydney, Queensland, Western Australia and Monash and the Commonwealth Scientific and Industrial Research Organisation (CSIRO), EMBL Australia was initiated in 2008 upon the country being granted the first Associate Membership of EMBL. It provides a direct link for Australian and European researchers and allows them to benefit

from the world-leading science happening on opposite sides of the globe.

During the day's programme, Senator Carr announced the appointment of Nadia Rosenthal as Scientific Head of EMBL Australia, the establishment of the EMBL Australia PhD programme, and the appointment of Edwina McGill as the first group leader within the Partner Laboratory Network.

"EMBL Australia will create and deliver scientific excellence focused on six research themes: regenerative medicine and stem cell biology, human genetics and disease, cancer and clinical research, chemical biology, plant biology and systems biology," said Senator Carr. "EMBL is renowned for creating the next

generation of scientific leaders by providing funding certainty and encouraging a collaborative approach. We are pleased that Australian researchers will be working with such an established model of success."

EMBL's Iain Mattaj and Silke Schumacher attended the launch alongside Governor of Victoria David de Kretser and the Consul-Generals of Denmark, Greece and Croatia, three of EMBL's 20 member states. "More than 170 people attended the launch," said Richard Larkins, Chair of EMBL Australia. "We're delighted and encouraged to see the level of support shown to the EMBL Australia initiative by Senator Carr and the science community."



L-r: Kim Carr, David de Kretser, Nadia Rosenthal, Silke Schumacher, Iain Mattaj and Richards Larkins



Photos: EMBL Australia



Photo: Marietta Schupp

## “It’s time to zoom out a bit”

In his ten years at EMBL, Jan Ellenberg has moved from being a group leader in the Gene Expression Unit to heading the unit, then leading the Cell Biology and Biophysics Unit, initially jointly with Eric Karsenti who was focusing on the TARA project. Now, as Jan takes over entirely, he tells [Lena Raditsch](#) about his plans.

hire young bright scientists in new fields, but the main research areas – membrane trafficking, cell division, cytoskeletal and nuclear organisation and function – will lie at the heart of our activities. I want to further strengthen the seamless mixing of biology, physics and chemistry because cell biology today requires a truly integrated interdisciplinary way of working. The mathematicians and physicists are vital, because we need mathematical tools to simulate dynamic processes in cells to understand the complexity of thousands of molecules and how their interaction in space and time create cellular functions.

I also plan to strengthen interactions with other units including Structural and Computational and Developmental Biology, the latter in order to bring cell biological experiments into the context of organisms. Examples are the work in Darren Gilmour’s group in fish embryos or that of my lab in mouse oocytes, where we look at molecular mechanism at the single cell level in the physiological context. The links with SCB will extend the resolution at which we study the functional properties of molecules beyond the limits of light microscopy to molecular and atomic resolution. Marko Kaksonen and Christian Haering’s labs are working to link dynamic functional assays and biochemistry directly with structural biology approaches.

**Will you exploit your powerful imaging and microscopy techniques further?**

Imaging in general has been a particular strength of the unit and my own group, and I really want to reinforce that and move it to new frontiers. The task will be to develop microscopy techniques that allow the probing of molecular mechanism in living cells at both ends of the scale: to work at the single molecule level but also in large embryos. In addition, we need imaging systems that can deal with the challenge of cellular systems biology; that is, to achieve the throughput and quantitative probing required to spy on the inner workings of cells under many different conditions. The dream of a cell biologist is a microscope that can make an atomic resolution movie of an entire living cell.

**Another job that will keep you busy is your involvement in one of the new European infrastructure projects.**

That’s right. The EC just gave the green light for the preparatory phase of Euro-BioImaging ([www.eurobioimaging.eu](http://www.eurobioimaging.eu)), a very large research infrastructure projects that involves 23 countries across Europe for which I act as a coordinator. Its goal is to create a pan-European imaging infrastructure for scientists, give them access to cutting-edge imaging equipment and provide training and services. With its Advanced Light Microscopy Facility, EMBL could act as a role model, and with Euro-BioImaging we now have the chance to develop a distributed system of imaging facilities for the benefit of all European scientists.

### What expertise in the CBB unit can you rely on?

Eric successfully merged physics with cell biology and achieved a lot looking at the cytoskeleton, especially microtubules. Now it’s time to zoom out a bit and start looking at more cellular functions, with the long term goal to understand the entire cell as the basic unit of life.

### ...and what’s new?

The research on the cell nucleus, which is studied by my group and Christian Haering’s. Also, Carsten Schultz’s chemistry group is moving to the unit, and his expertise will help us to study the activity of molecules we know little about today with new types of probes.

### What challenges lie ahead for you?

Since we have a lot of turnover coming up, recruitment is very important in the near future, as well as a major refurbishment of our labs and the completion of the rooms for the new imaging facility. I want to

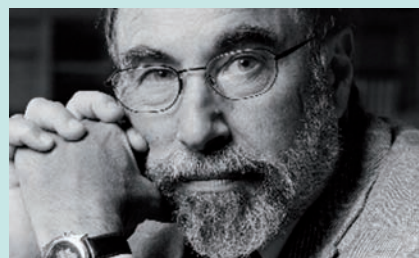
## Looking to the future

[www.embl.org/vision2020](http://www.embl.org/vision2020)

To celebrate the inaugural year of the EMBL Advanced Training Centre and to set the stage for decades of exceptional scientific presentations, EMBL is hosting a unique series of forward-looking scientific lectures by world leaders in their fields, Vision 2020.

Several Nobel laureates have accepted the invitation to share their vision of the future with an audience of scientists from different areas of the life sciences and interested members of the public. World leaders will share their thoughts on the exciting new developments and possible breakthroughs

they see shaping their scientific fields within the next 10 years. Caltech President Emeritus Professor David Baltimore (below) will be the first speaker; he visits EMBL Heidelberg on 28 April to talk about



microRNA control of inflammatory and immune processes.

“These scientific lectures will take place about once a month during the inaugural year of the ATC,” says Associate Director Matthias Hentze. “We’d especially like to encourage our scientific colleagues from Heidelberg and the region to attend, as the series will provide an ideal platform for us all to discuss the future state-of-the-art in science.”

Future speakers will include Harald zur Hausen, Paul Nurse and Christiane Nüsslein-Volhard. David Baltimore’s seminar will be at 16:00 on 28 April.

# Building on a solid foundation

New EMBO Director Maria Leptin has been in office for three months. What are her plans for the organisation?

When Maria took over the helm of EMBO from Hermann Bujard in January, she wasn't surprised to find it running smoothly and delivering its services to the community. "Knowing the organisation from my involvement in the membership and scientific publication committees and Council, I expected to find it going strong," says the developmental biologist. "Having said that, I'm not going to sit back comfortably and just watch!"

Maria, who's the fifth director in EMBO's forty-five year history, has identified three areas in which she feels the organisation should develop new activities and consolidate existing ones. The first of these is scientific publishing. "Authors complain about the excessive demands by referees for additional experiments, referees about the burden of reviewing, and everyone complains about the dominating role of the impact factor," she says. "We must think about how we can contribute to developing new models for the publication of scientific data. We'd like to offer ways of open-access and web-based publication of results, but

mechanisms for guaranteeing quality need to be found."

Secondly, Maria would like to strengthen EMBO membership outside the classical fields of core molecular biology, structural biology and cell and developmental biology. "We'd like to include more members working in areas such as evolution, neurobiology, basic medical research and ecology," she says. "The nomination form should certainly be used to flag candidates from under-represented disciplines."

Similarly, she would like to establish closer ties with other nations on a broader basis. "I welcome the introduction of EMBO Global Exchange, which promotes lecture series and workshops in partner countries," she says. "It also invites leading scientists from elsewhere for lecture tours in Europe. Top-level performance of molecular biology within Europe absolutely requires interactions beyond our borders."

On top of all this, Maria will also be establishing a research group at EMBL, but she's thrilled to have a hand in continuing

the good work begun by previous directors. "EMBO plays a vital role in representing biological research, and that's only possible thanks to its extensive networks of respected leaders across many fields."

*Excerpts from 'The first 100 days' in EMBO encounters, spring 2010*



Photo: Marietta Schupp

## Rowing for EMBL



Julia (second from left) and the team pose for some publicity shots before the race

The EMBL International PhD Programme (EIPP) found an unexpected way to advertise recently when one of its students, Julia Fischer from the Thornton group at EMBL-EBI, was selected to represent the University of Cambridge as a rower in the annual Henley Boat Races against Oxford.

A series of 2000m races held on the river Thames, the Henley Boat Races were founded in 1975 as lightweight competitions to complement the famous heavyweight Oxford-Cambridge Boat Race. Julia's club, the Cambridge University Womens Boat Club (CUWBC), received sponsorship from the EIPP, in recognition

of which the EMBL logo was printed on the team's training T-shirts and included in the official programme.

"You have to be very strict to combine rowing with a scientific career," says Julia. "I get up at 5am every day, go training, and then it's straight to the EBI until 5.30pm."

The CUWBC didn't win the race on 28 March, but a great day was had by all, with supporters from the EBI – including Nick Goldman and Janet Thornton – stopping by to cheer Julia on. "EMBL's support helped to keep this important event for women's sports running," says Julia.

## Mark your diaries for Career Day

This year, Career Day at EMBL Heidelberg will take place on 10 June, the day before Lab Day. Organised as an EICAT activity by the EMBL predoc and postdoc programmes together with EMBLEM, the event aims to provide an overview of alternative, non-academic career possibilities. It's open to staff from all sites, as well as those from local research institutions. PhD and postdocs, in particular those who feel curious about 'what else is out there', are especially encouraged to attend.

The invited speakers are representatives from a broad spectrum of disciplines, covering research in industry, publishing, patents, consulting and more. They'll describe their career paths and detail what their daily work entails, and they will also be available during the coffee breaks and lunch for personal chats.

The event is free, but registration is required at [www.embl.de/careerday](http://www.embl.de/careerday).

## “Putting Europe on the map”

Matthias Haury (EMBL), Gerlind Wallon and Anne-Marie Glynn (EMBO), Matthias Hentze (EMBL)



A new series of joint EMBO|EMBL symposia takes an unusual ‘top-down’ approach. We gathered together coordinators from both sides to tell us more...

### What’s the aim of these new symposia?

*Gerlind Wallon (Deputy Director & Programme Manager, EMBO):* From EMBO’s point of view it’s a way of running a different kind of meeting. Normally EMBO courses and workshops are ‘bottom-up’ initiatives where scientists apply to run a specific conference. This is more of a ‘top-down’ affair where a selected group of scientists from EMBO and EMBL think about the future of science and choose the topics that we would like the scientific community to look into with a symposium.

*Anne-Marie Glynn (EMBO Courses & Workshops Programme Manager):* These events are complementary to existing courses and conferences. The topics that have already been chosen are in a different or new direction to those that either EMBL or EMBO has done independently before, and with it we hope to bring together new groups of researchers here.

*Matthias Hentze (EMBL Associate Director):* That’s true for EMBL too, and from our point of view it’s also linked to now

having the ATC. The aim was to have a venue that serves all of Europe rather than just Germany or the Heidelberg area, and so clearly we have to offer events that are needed in all of Europe. This is actually a revival of a series of symposia hosted at EMBL under the EMBO banner back in the 70s and 80s which were very well-attended.

*Matthias Haury (Coordinating Manager EICAT, EMBL):* It’s a good opportunity to put the ATC on the map and to increase its visibility – and that of EMBL and EMBO – among scientists all over Europe and beyond. We hope this will help to put Europe more strongly into focus in the world’s scientific community as a place where high-quality research and exciting new scientific conferences can be found.

### How is the responsibility shared between EMBO and EMBL?

*Anne-Marie:* Everything is done in a collaborative way. All decisions are being made jointly about how to proceed.

*Matthias Hentze:* It emphasises the fact that

EMBO and EMBL are complementary and are doing attractive things together. The EMBO|EMBL Symposia are also a unique type of event that Europe hasn’t had before on this level.

*Gerlind:* Both EMBO and EMBL are planning to make the symposia a regular fixture in their conference portfolios. In addition, we’ve set aside a substantial amount of funding to go towards travel and registration fees for young scientists or those with financial constraints.

*Matthias Haury:* Yes, we want to be able to offer a chance to attend to those scientists who wouldn’t otherwise be able to consider it. Combining travel and registration fee waivers to support young investigators is different from anything we’ve done before, but we’re hoping it will have a big impact.

### What events are already arranged?

*Anne-Marie:* We’ve got three symposia coming up this year: ‘Human Variation: Cause and Consequence’ in June, ‘Structure and Function of Neural Circuits’ in September and ‘The Non-Coding Genome’ in October. The committee decides on a relevant topic and scientific area and then approaches high-profile scientists working in that area to get them involved. For 2011 five topics have been selected.

*Matthias Hentze:* Although it’s an unusual top-down approach, the committee is happy to receive suggestions for topics and expressions of interest. People shouldn’t see themselves as applicants, but as inspirational sources!

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

## Life at the EBI

On 4 March EMBL-EBI welcomed 47 students and early-stage researchers to EBI Open Day, the highest number of visitors so far to the event. The day provided an opportunity to find out more about the role of the EBI as Europe’s leading bioinformatics centre and to enjoy one-on-one discussions with resource experts.

A new addition to the programme was a

series of talks entitled ‘Life as...’, presented by scientific curator Sandra Orchard from the Proteomics Services Team, PhD student Nenad Bartonicek from the Enright Group and postdoc Karyn Megy, from the Ensembl Genomes Group. From visitor feedback, the favourite aspects of the day were the interactive demo sessions of EBI databases and tools, finding out about the EBI’s research programme and the ‘Life as...’ talks. One participant

said: “I found the talks very motivating. They really showed why the EBI is a reference institution!”

The EBI Open Day is suitable for anyone who wants to know more about the EBI or hear about career opportunities in bioinformatics. The next one will be on 2 November, and if you want to register your interest, visit [www.ebi.ac.uk/training/penday](http://www.ebi.ac.uk/training/penday). Registration will open later this year.

## A touch of spice...

... is an essential ingredient for any successful dish. But spice wasn't needed to add flavour to the third EMBL staff-alumni reunion on Monday 8 March.

With a programme resembling an Italian menu and sessions entitled *antipasto*, *primo piatto*, *secondo piatto* and *dolce e caffè*, staff and alumni were served a variety of scientific and science and society talks with lots of opportunities to network.

Around 200 participants attended the event in the new EMBL Advanced Training Centre (ATC) a day before its official opening ceremony. Alumni proudly presented their career paths after leaving EMBL, highlighting the role of collaborations and interdisciplinary research – key elements to the success of EMBL – in their own achievements. One example is a PhD Programme recently founded by former predoc Giuseppe Testa, which brings together scholars from the life sciences and humanities to address science and society issues. Another was Eric Karsenti's TARA expedition which enthralled the audience and demon-

strated how to bring science to the public effectively. Former Director General Fotis Kafatos encouraged all present not to underestimate their role in the future of science: "As scientists we have much more strength than we think we do, and we should use this wisely to maintain and defend the primacy of science."

Alongside trips down memory lane, talks also focused on the value of the Alumni Association to EMBL and the way staff past and present can play an active role in a mutually beneficial relationship. "You are our most important asset, and the member states love to get you

"As scientists we have much more strength than we think, and we should use this wisely"

– Fotis Kafatos

back when you leave," said DG Iain Mat-taj. "The alumni brain pool is formidable; lets link it and use it," added Alumni Association chair Giulio Superti-Furga.

The event culminated with the official opening ceremony of the Matti Saraste Courtyard which was made possible by donations of staff and alumni. Participants gathered between the new EMBL canteen and ATC entrance to get a view



into the courtyard, from which 300 white balloons were released in memory of the late Matti, EMBL group leader and head of the Structural and Computational Biology unit from 1990-2001.

Other events included an exhibition of alumni science in the member states thanks to the tremendous efforts of former EMBL photographer Maj Britt Hansen and Freddy Frischknecht, sales of goods donated by alumni, a house warming party in the rooftop lounge and dinner and band. The alumni posters are still exhibited at the top of the B helix and can also be viewed on the EMBL alumni website, together with the reunion programme and more speaker information.

"I had a ball," exclaimed EMBL's first female Senior Scientist, Sara Courtneidge, who travelled from the US to present her talk on life in industry: "I certainly won't wait another fifteen years before coming back."

– Anastasios Koutsos & Mehrnoosh Rayner

Left: The official opening ceremony of the Matti Saraste courtyard at the ATC, a "refuge for quiet contemplation" in Matthias Hentze's words. Below: a housewarming party for the new rooftop lounge; below right, EMBO director Maria Leptin with alumna Sara Courtneidge and Association chair Giulio Superti-Furga



Photos: (l & r) Marietta Schupp; (m) Hugo Neves

## The Irish connection

The first ever EMBL local chapter meeting in Ireland was hosted by the Science Foundation Ireland (SFI) on 24 February and attracted alumni from academia, industry and government alike. Former EMBO Director Frank Gannon, EMBL DG Iain Mattaj and EMBL group leaders Eileen Furlong and Dónal O'Carroll were in attendance. The participants were keen to discuss how scientific links between EMBL and Ireland can be improved, and Iain promised EMBL support for the future activities of the chapter. In turn, alumni offered to promote the EMBL PhD and postdoctoral

programmes and courses and conferences at their institutes, and to look into the development of a 'mentor' network for future EMBL alumni coming to Ireland.

Jez Simpson, Professor at University College Dublin and former EMBL Scientific Project Manager in the Pepperkok group, and John Morrissey, Lecturer and Principal Investigator at University College Cork and former EMBL predoc in the Tollervey group, were elected as co-chairs to run the local chapter. Goals include developing closer ties with the EMBL community, in particular EMBO

Members and Irish council delegates.

In the afternoon, the EMBL representatives and alumni attended an open meeting to showcase EMBL to the wider scientific community in Ireland, 'Bringing the Excellence of EMBL to Ireland'. Eileen, Dónal, Jez and alumnus Emmanuel Reynaud, now at University College Dublin, presented talks on research at EMBL and in Ireland to the audience of scientists from institutions across the country. Tanya Mulcahy from University College Cork, the Irish partner University for the EMBL PhD programme, reviewed links between the EMBL PhD programme and Ireland. The Irish Minister for Science, Technology and Innovation, Conor Lenihan TD, joined the conference in the afternoon, and indicated a commitment to supporting scientific research, giving grounds for optimism for the future of science in the country.

The next Irish local chapter meeting is planned for early 2011.

– John Morrissey



Back row: Jens Nielson, Des Higgins, John Morrissey, Sally Cudmore, Jez Simpson, Matthias Wilm. Front row: Juan Pablo Labrador, Sinead O'Brien, Eileen Furlong, Emmanuel Reynaud, Iain Mattaj, Frank Gannon, Chris Creevey, Dónal O'Carroll

## Being Frank

The Irish chapter meeting was the ideal opportunity to chat to former EMBO Director Frank Gannon about his work at SFI

"The major challenge facing SFI – the main scientific funding agency in Ireland – is the collapse of the Irish economy," says Frank, who took over as Director

Please mark your diaries with the forthcoming alumni events:

- 11 June, 2pm: Jens Preben Morth will be presented with the 2010 award at the **John Kendrew Award Ceremony**.
- 26 June: alumni from industry meet at the **EMBL Summer party**.
- 27 August: deadline for John Kendrew Award **applications for 2011**.

General in 2007. "My task is to ensure that politicians know what the outcomes of the SFI investments have been and try to get further increases in funding."

This sounds like a suitable challenge for Frank, whose period at EMBO was all about growth. As director he introduced the Young Investigator Programme, the Science in Society activities, the Installation Grants, the World Programme, the Fellows Network and two very successful journals, *EMBO Reports* and *Molecular Systems Biology*, all the while increasing the number of member states supporting EMBO. Frank also led an active laboratory at EMBL, and at different stages of his career acted as EMBL unit and scientific coordinator, head of the graduate programme and head of tech transfer. "Those were very busy but fulfilling times, with the most rewarding aspect being that EMBO never lost its core values," he says.

In its ten years of existence, SFI has

already made an impact: 50% of multinational investments in Ireland are in R&D, for example, and Irish science in terms of citations has moved from a world ranking of 33rd to 17th. "The crisis will pass, so SFI must play a central role in a renewed Irish economy," he says. "This will be based on quality jobs in high-tech industries driven forward by research groups that rank top worldwide."



Photo: Marietta Schupp



## Science things to make and do

Visitors to this year's Cambridge Science Festival could sneeze, sort or sink thanks to a team of volunteers from EMBL-EBI and the Wellcome Trust Sanger Institute. The 'Science on Saturday' event on 13 March provided over 1,000 visitors with the opportunity to explore DNA and genomic diversity by taking part in a range of hands-on activities.

To help visitors of all ages to get the best out of the day, the EBI-Sanger team coordinated three separate 'trails' linking activities according to participant age. The under 7s could create DNA helices out of jelly sweets or make sequence bracelets; 8-13 year olds could play DNA battleships with known cancer genes as the targets and have a go in the new 'sneeze zone', investigating how far pathogens can travel; and teens to teachers, i.e. anyone over the age of 14, could challenge each other against the clock with a new data sorting game. Several of the 16 activities delivered on the day are available from [www.yourgenome.org](http://www.yourgenome.org), an



online resource produced by the Sanger Institute.

The EBI's Outreach and Training Team and the Sanger Institute's Communication and Public Engagement Team would like to thank all the volunteers for their hard work on the day. To find out more, visit [www.admin.cam.ac.uk/sciencefestival](http://www.admin.cam.ac.uk/sciencefestival).

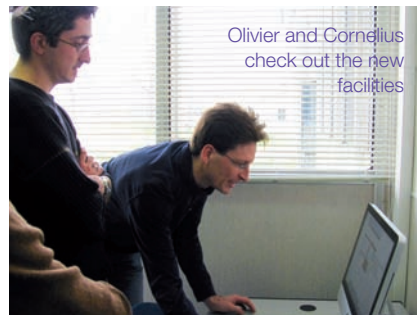
## Reading room for Monterotondo

Szilárd Librarian Anne Barkworth is storming ahead in her quest to transform the outstations' library and reading room facilities.

Following on from last year's revamp of the library at EMBL Grenoble, Anne has turned her attention to Italy. Monterotondo had no quiet area for study at all until she and Stefano Alema, head of campus partner IBC-CNR (National Research Council's Institute of Cell Biology), put their heads together and found a solution.

"IBC provided the room and the furniture, and EMBL contributed the brand new Macs which are available for anyone to use," says Anne of the new reading room, which is situated in the IBC building just next door to EMBL and also contains an archive of books and journals. "Now students have somewhere to concentrate away from the lab, and visitors can base themselves there instead of hanging around in the kitchen."

The Monterotondo staff were thrilled with the room, with many from both EMBL and IBC attending Anne's 'launch party' on 3 March. She was back there in April to finish cataloguing the lab's book resources; next, she'll be off to help EMBL Hamburg.



## It's just an expression...

Researchers led by EMBL-EBI's Nick Luscombe and EMBL Heidelberg alumna Asifa Akhtar, who's now at the Max Planck Institute for Immunobiology in Freiburg, have found unexpected new players that regulate how genes are expressed in the fruit fly *Drosophila melanogaster*.

The study, published in the journal *PLoS Genetics* on 12 February, has revealed that nucleoporins, the building blocks that make up nuclear pores, actually promote transcription. The researchers were able to measure genome-wide binding and show that the loss of one nucleoporin affected the expression of thousands of genes. Nucleoporins have been well characterised as part of the nuclear pore, which is made up of over 400 nucleoporins but the discovery of this additional role means that the hunt is on to know more.

"Surprisingly, we found that two nucleoporins seem to be able to regulate gene expression," said Juanma Vaquerizas, a postdoc in Nick Luscombe's group at the EBI. "We found them bound to 25% of the genome, covering mostly actively transcribed regions. This doesn't seem to have anything to

do with their role as part of the nuclear pore.

"Our work raises lots of questions, for example how are nucleoporins targeted to specific parts of the genome? Do other nucleoporins affect transcription in the same way?"

Recent research had suggested a similar role for nucleoporins in yeast, but this is the first study to show that they can regulate transcription in a higher organism.

## A *mélange* of students

Grenoble's Partnership for Structural Biology (PSB) contains 80 students from widely diverse backgrounds, but the biologists, chemists, physicists and computer scientists all share a common interest: structural biology. The annual PSB Students' Day, organised by and for the students of the



partnership, is a unique opportunity for the *smorgasbord* of interests in the different communities – EMBL Grenoble, UVHCI, the Institut de Biologie Structurale, the Institut Laue Langevin (ILL) and the ESRF – to combine.

This year's meeting on 26 January at the ILL began with a poster session, after which senior students gave presentations of their results followed by shorter ones by first years. "Our meeting gave us the opportunity to discover common topics and inspire new research ideas, and we're all looking forward for the 2011 *cuvée*," commented Yan Nie, a predoc in EMBL's Berger group and a member of the PSB student committee which organised the event.



# The end of an era in ski trips

This year's famous EMBL Ski Trip was notable not only for its glistening pistes and copious fondue but also

for the fact that it was the last that its founder, group leader Damian Brunner, will attend as an EMBL staff member.

The eagerly awaited event on 18-21 March, which this year went to Les Portes du Soleil in Châtel, France, was the first in almost a decade not to have Damian at the helm. He'll be leaving EMBL in the summer to take up a professorship at the University of Zürich in his native Switzerland.

The annual ski trip, which is open to EMBL staff from all sites, alumni, family, friends and other hangers-on, has become one of the highlights of EMBL's social calendar since the first one in 2002. That was

the year after Damian started as a group leader in the Cell Biology and Biophysics Unit and attended a lab ski retreat organised by Gareth Griffiths. "There had been an EMBL-wide ski event in previous years, but it had died off," explains Damian. "The following year we tried organising a unit one which was also open to people outside CBB, and it quickly became much more popular than the lab-specific ones."

Over the years Damian was supported in the organisation of the trip by Irena Niebling, who left EMBL in March this year. When the trip got too big to cope with, they enlisted the help of Philipp Heindl of 'No Summer' Winter Sports Events, who helps with the logistics as well as giving les-

sons. Since then the trip has hit the slopes at some of Europe's top resorts, with everyone having a great time despite a few hair-raising incidents, like the time that Damian will never forget when he nearly killed DG Iain Mattaj during the tobogganing.

Even though he's leaving the organisation of the trips in the capable hands of Lars Hufnagel and Elisabeth Hillier, Damian is sure he'll be back to join future ones as an alumnus. "The great thing about it is the variety of people that go, from the newest predoc to the DG," he says. "People tell me that it's one of the best ways to make new friends and feel part of things at EMBL."

For a taster of the trip, watch the latest video made by Matt Betts at [www.youtube.com/watch?v=0zgQbUbkVyM](http://www.youtube.com/watch?v=0zgQbUbkVyM).

Right: New organiser Lars Hufnagel, Damian and Irena take personal responsibility for the delivery of essential supplies for the journey. Below: EMBL skiers contemplate the 'Swiss Wall'



Photos: Wolfgang Hubner

## Bringing data to life

EMBL scientists have helped produce a special *Nature Methods* issue highlighting the latest methods and challenges of visualisation in modern biological research. Freely available at [www.nature.com/nmeth/journal/v7/n3s/index.html](http://www.nature.com/nmeth/journal/v7/n3s/index.html), the issue promises to become a valuable resource for all biologists.

"Computer-based visualisation is widely used in biology to help understand and communicate data, generate ideas and gain insight into biological processes," explains Seán O'Donoghue, Research Scientist in the Schneider Team at EMBL Heidelberg, who coordinated the special issue. "Twenty years ago, only experts could create images of a protein structure at atomic detail, for example, but today software tools are widely available and used by everybody."

Seán worked on the special issue alongside nine other EMBL scientists and several alumni, and it features five reviews covering visualisation methods across some of the main areas of today's biological research: systems biology, genomics, 3D macromolecular structures, alignments and phylogenies and image-data. "The issue is designed to be of general interest to a wide range of experimental biochemists and molecular biologists," says Seán.



## Finders keepers? EMBL-EBI Science & Society Symposium

Can private funding of research undermine the quality and reliability of results? What can be done to retain trust in public-private partnerships? These were some of the questions at 19 March's EMBL-EBI Science & Society symposium, part of the Cambridge Science Festival.

'Who owns science? Promises and pitfalls of public-private partnerships', was organised by EBI staff and predocs and chaired by Nobel Prize winner and founding director of the Wellcome Trust Sanger Institute John Sulston. The speakers were former GSK scientist David Searls, who invited the audience to consider alternative approaches to stimulate innovation, and Stuart Parkinson from Scientists for Global

Responsibility, who suggested greater openness and more stringent ethical standards governing public-private partnerships. Tim Hubbard from the Wellcome Trust Sanger Institute and Gábor Lamm of EMBLEM provided a glimpse to the future and a look back at science in the days of Leonardo da Vinci.

"The speakers dealt with the complex issues in an engaging and informative manner," commented Michele Mattioni, EBI predoc and member of the organising committee. "I especially enjoyed hearing about what's being done to overcome the pitfalls of the current funding system for research."

The footage can be watched at [www.ebi.ac.uk/Information/events/whooownscience](http://www.ebi.ac.uk/Information/events/whooownscience).

# Top of the pops

The paper describing ClustalW has just become the tenth most cited paper of all time. [Lucy Patterson](#) talked to EMBL alumnus Des Higgins, now at University College Dublin, to find out how it all came about...

Used in labs all over the world, ClustalW is an essential tool for any molecular biologist. Created by Julie Thompson, Des Higgins and Toby Gibson at EMBL back in 1994, the paper which describes it (PMID 7984417) is the most cited bioinformatics paper ever, with nearly 30,000 citations.

The competition is pretty stiff: top of the list is a protein quantification methods paper from O.H. Lowry which clocks in with an incredible 300,000 citations. Published in 1951, this chart-buster is typical of the higher-ranking papers, all published pre-1990 and almost all describing methods in molecular biology. With much less time to accrue citations, this makes the success of Thompson *et al.* all the more remarkable.

Des wrote the first of the Clustal (Cluster alignment) programs in the late 80s whilst a postdoc at Trinity College, Dublin. "Most of the lab's work involved making phylo-

genetic trees by aligning and comparing sequences," he explains. "There were some alignment programs around, but you tended to need huge mainframe computers to run them – big things with flashing lights. So we were still doing alignments by hand with paper and coloured pens, which was really tedious and error-prone." So Des set about writing a basic program that could run on a desktop PC, publishing a first edition of Clustal in 1988.

A couple of years later, Des had moved to EMBL Heidelberg to work for Graham Cameron, then head of the Data Library (now the European Nucleotide Archive). It was here that Des met Toby Gibson who, still a coloured pens man, was easily won over by the idea of automated alignment. The pair brought in software engineer Julie Thompson, whose programming skills, complemented by Toby's knowledge of

proteins and Des's experience, brought about an all-new version of the program – ClustalW.

It might not have been the most sophisticated alignment program around, but ClustalW was a hit with computer-wary biologists. "We went out of our way to make it user-friendly," Des explains. "Competing software was often rather geeky and complicated – you needed to know some maths or run Unix to use it. We put a lot of effort into the interface to make it really intuitive and self-explanatory. It's about being nice to your users!"

There have been updates over the years, including the widely-used ClustalX version, but the guts of the program have remained the same. "What has changed is the sheer volume of proteins in the databases," says Des. "The biggest protein families now include over 100,000 sequences and these numbers will rocket as still more genomes get sequenced, so we need to consider how to do bigger alignments. We're planning a dramatic overhaul in the next year or so."



Des outside Kennedy's Bar in Dublin, where the name Clustal was invented in 1988

## First ITN for EMBL

EMBL has begun the coordination of its first FP7 Marie Curie Initial Training Network (ITN) with the funding of a €4.6m project, Nucleosome 4D.

Genome Biology Unit group leader Andreas Ladurner will lead the consortium which comprises 14 partners and will last for four years. As well as several other EMBL groups past and present, the partners include groups from Paris, Switzerland, Norway, Italy and Israel, as well as biotech spin-offs and industry associates. They will contribute structural biology, biophysics, cell biology, live-cell imaging, biochemistry, genetics, genomics and bioinformatics approaches to the understanding of nucleosome structure and function

An ITN is particularly concerned with the training of early-stage investigators, so several PhD students and postdocs will be recruited. "In addition to its research, Nucleosome 4D will run courses, secondments, workshops, a summer school and a large final conference in Heidelberg," says Marzia Sidri, Scientific Administrator in the Ladurner group.

The partners convened at EMBL's ATC for a kick-off meeting on 12 April, during which they introduced their groups and project tasks.

## Benvinguts a Barcelona! [www.the-embo-meeting.org](http://www.the-embo-meeting.org)

Now in its second year, The EMBO Meeting will take place in Barcelona on 4-7 September and will again feature an impressive line-up of scientific speakers, including two Nobel Laureates. Presenting the latest life science news both inside and outside the contributors' fields, the meeting inspires new research collaborations and projects. This year the poster sessions will be stand-alone and more prominent, offering an ideal opportunity to share scientific findings and engage with early career researchers.

"I have recommended The EMBO Meeting to my lab members, especially to students towards the end of their PhD who are wondering what to do for their

postdoc," says group leader Gisou van der Goot from EPFL, Lausanne. "The EMBO Meeting gives them the opportunity to hear outstanding speakers on various topics."

"Submitting my abstract enabled me to share my research with scientists from different areas and provided me with new insights into my own findings," adds Kari Vaahromeri, a PhD student at the University of Helsinki. "As I was selected for an oral presentation, it also gave me the opportunity to present in front of some of the world's leading researchers."

For the first time this year, The EMBO Meeting will offer a group discount. The deadline for abstract submission and early registration is 15 May. *– Katja Linssen*



## When is a biscuit not a biscuit?

...When it's a vital part of a phylogenetic tree. Classifying everyday favourites such as custard creams alongside luxurious Belgian wafers was just one of the activities used to introduce 34 secondary school teachers from around Europe to the use of biological databases as part of the first ever ELLS LearningLab at the EBI on 8-10 March.

For three days, the teachers became pupils to learn about the explosion in biological data, the breadth of databases available and how this data is used by researchers. The objective of the course was to show how real-life data can be used in the classroom to demonstrate biological principles such as translation, protein structure, evolutionary biology and genetic variation.

The teachers were also able to update their knowledge of next-generation se-

quencing and its application in efforts such as the 1000 Genomes Project with seminars by Paul Flicek of the EBI's Vertebrate Genomics Group and EMBL Heidelberg's Jan Korbel. These were complemented by encounters with the full range of next-generation sequencing machines on a tour of the Wellcome Trust Sanger Institute.

It wasn't all hard work, though. On a tour of Christ's College the group admired the rooms of Charles Darwin, which have been restored to the way they were when he was a student there in 1828-1831.

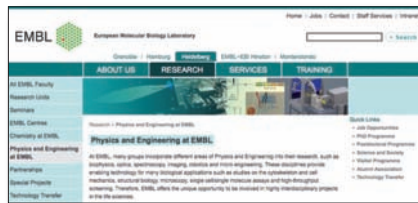
When one attendee was asked what she had enjoyed most, she said: "It's the mixture that makes it so good! I enjoyed the seminar and practical work, but it was almost equally important for me to meet others from all over Europe and exchange ideas."

## European scientists battle an ancient killer

Matthias Wilmanns and Peer Bork are teaming up with EMBL alumnus Luis Serrano and other researchers across Europe to fight tuberculosis with a new project called SystemTB (Systems Biology of *M. tuberculosis*), which kicked off on 1 April.

Luis, now at the Centre for Genomic Regulation in Barcelona, coordinates the project, which is funded by the EC's FP7 programme. It brings together 13 institutions in nine European countries to look at how *Mycobacterium tuberculosis* survives both inside and outside cells and how it attacks the immune system. "International experts from various fields will use different techniques, from the classical biology of mycobacterium to the most cutting-edge high throughput technologies, '-omics' and mathematical modelling," he says.

"If we want to know better how to fight against this thousand-year-old killer, we will have to work hard together to understand its lifestyle and strategies," adds scientific project manager Michela Bertero.



## Let's get physical

The EMBL website now has pages devoted to the physics and engineering side of the institute's research.

Emphasizing EMBL's multidisciplinary in research, and complementing the established 'Chemistry at EMBL' pages, 'Physics and Engineering at EMBL' covers such areas as synchrotron instrumentation for structural biology at EMBL Hamburg and the Lemke, Merten and Nédélec groups at EMBL Heidelberg.

"We're happy to help people who are trained in the physical sciences, including predocs or postdocs who have never received training in biology, acquire a second competence," says François Nédélec, whose group works on the cytoskeleton using computer simulations and micro-fabrication. "Interdisciplinary is an essential component of biological research, and will take an even greater role in the future."

The new pages are at [www.embl.de/research/physics\\_engineering/index.html](http://www.embl.de/research/physics_engineering/index.html).

## Building bridges from research to medicine

On 16 March the Nordic EMBL Partnership for Molecular Medicine officially inaugurated the Institute for Molecular Medicine Finland (FIMM) in Helsinki.

Together with the Centre for Molecular Medicine Norway and the Laboratory for Molecular Infection Medicine Sweden, FIMM's research will be dedicated to molecular medicine, investigation of the basis of disease and the discovery of new treatments. The joint research institute is operated by the University of Helsinki in collaboration with the Hospital District of Helsinki and Uusimaa (HUS), the National Institute for Health and Welfare (THL) and the VTT Technical Research Centre of Finland.

"FIMM is a prime example of an international multidisciplinary institute combining high-quality science with access to patient materials and links to medical expertise," says Director Olli Kallioniemi. FIMM has 150 employees working on cancer, cardiovascular, neuro-psychiatric and viral diseases, and carrying out translational research to explore new diagnostics and treatments and promotes human health via research on personalised medicine.

The Nordic EMBL Partnership for Molecular Medicine was initiated in 2007.

## obituary

### Leena Peltonen



Leena Peltonen, former EMBL SAC member and Research Director at the Nordic EMBL Part-

nership for Molecular Medicine's Institute for Molecular Medicine Finland, died on 11 March. Leena, who also held appointments at the Wellcome Trust Sanger Institute and the Broad Institute at the time of her death, was a leading human geneticist. She was a regular panel member and speaker at EMBL events and conferences, and had recently been awarded the honorary title of Academician of Science, the highest honour in Finland.

⇒ Registration is now open for the following **EBI hands-on bioinformatics training course** to help you make the most of your data: 'Joint EBI-Industry Workshop: Cheminformatics in R' will be held on 17-18 May (registration deadline 3 May). See [www.ebi.ac.uk/training/hands-on](http://www.ebi.ac.uk/training/hands-on) to register and for full programme details.

⇒ **Chairman and CEO of Inserm André Syrota** visited EMBL Heidelberg on 22 February. Inserm is a French public research body with 316 research laboratories conducting research in biology, medicine and public health, and the meeting with EMBL was about possible collaborations between the two, as well as French participation in biomedical research infrastructures.

⇒ EMBL Heidelberg had a visit from the **Japan Science and Technology Agency (JST-CRDS)** on 29-30 March. The trip was a fact-finding mission in their quest to establish an infrastructure, the Translational Health Informatics Base, to link life sciences knowledge and clinical and medical data.

⇒ Representatives from the **Israeli Ministry of Science and Technology (MOST)** visited EMBL Heidelberg on 1-2 March with a particular interest in EMBL's financial model.

⇒ From the 5-7 May, EMBL Hamburg will host the first in a series of **EMBO Conferences** entitled 'Catalytic Mechanisms by biological systems: at the interface between chemistry and biology'. The event aims to bring together experts and students working across this multidisciplinary field

and to stimulate discussions, especially important for the development of biotech related applications. For more information see [www.embl.de/events/2010/CMS10-01](http://www.embl.de/events/2010/CMS10-01).

⇒ On 24 March the **EMBL Advanced Training Centre's training labs** were ceremoniously unveiled. Katrin Tön-



shoff (above right) and Meike Leupold from the Dietmar Hopp Stiftung, which provided the funds for scientific equipment for the labs, joined Matthias Hentze (above left), representatives from EICAT and Resource Development to cut the ribbon.

⇒ This year's **EuroScience Open Forum (ESOF)**, the biennial pan-European meeting dedicated to scientific research and innovation, will take place in Turin on 2-7 July. EMBL Monterotondo's ELLS officers Rossana De Lorenzi and Tommaso Nastasi will present a workshop on metagenomics and its wide potential for application in fields such as human health, climatic change and renewable energy, while EMBO's Science & Society programme will present two sessions on 'Feeding the world in times of global change', in which speaker panels of world-renowned experts will address the issue of food security, which is be-

coming a key challenge as global agricultural production needs to double to feed a world population that may reach 9 billion by 2050. ESOF is an independent forum for open dialogue on the role in society of all sciences, including the humanities. See [www.esof2010.org/schedule](http://www.esof2010.org/schedule) for details.

⇒ At this year's **International Biology and Synchrotron Radiation** conference in Melbourne, it was decided to hold the next conference in 2013 in Hamburg. The case for the location was presented by the Head of EMBL Hamburg Matthias Wilmanns and group leader Dmitri Svergun. "With our new beamlines at PETRA-III and the associated facilities up and running, Hamburg will be an ideal place for this type of event," said Matthias.

⇒ A delegation of technicians from Norway's **University of Bergen** visited EMBL Heidelberg on 12-13 April as part of a programme for further education and competence building. They toured the core facilities and learnt about common experimental techniques and lab routines.

⇒ Other recent **visits** to EMBL Heidelberg included a delegation from CEITEC in Brno on 13 April and a student group and their professor from Szeged University, Hungary, on 31 March-1 April.

⇒ Upcoming **courses in the General Training and Development Programme** include:

EMBL Heidelberg	
1 May	How to be a Successful Interviewee
12 May	Understanding Personality Using the MBTI
26 May	Wiki Set up and Administration
EMBL-EBI	
26 April	Managing your Career after EMBL
27 April	How to Boost your Chances of Getting a Job
12 May	Conflict Management
24 May	Effective Writing (part 2)
27 May	Personal Impact & Time Management

Please see [http://intranet.embl.de/personnel/training\\_development/index.html](http://intranet.embl.de/personnel/training_development/index.html) for more information.

events@EMBL

**Arts at EMBL**  
Heidelberg, Friday 30 April 2010

**PROGRAMME**

Part I: Symposium  
14:00-17:00 ATC auditorium

**SCIENCE & ART**  
Keynote lecture:  
Martin Kemp  
University of Oxford

'Splashing around:  
some structural intuitions  
in art and science'

Panel Discussion:  
Nadia Rosenthal  
Aslihan Sanan  
Giovanni Frazzetto  
Diva Tommel

**PROGRAMME**

Part II: EMBL arts festival

Exhibition in the ATC:  
'Beauty in Science'

music@embl  
17:20-18:10 ATC auditorium

Thalia theater group  
18:10-18:30 ATC auditorium

Joint beer session  
17:00 - 20:00 ATC Foyer

jazz@embl  
18:30 - 20:00 ATC Foyer

For more information please visit:  
[http://www.embl.de/aboutus/science\\_society/symposia/index.html](http://www.embl.de/aboutus/science_society/symposia/index.html)

EMBL

## events@EMBL

**28 April EMBL Heidelberg**  
**Vision2020 Lecture Series:** MicroRNA control of inflammatory and immune processes. David Baltimore, Caltech

**29 April EMBL Monterotondo**  
**EMBL Distinguished Visitor Lecture:** Sex and Death in Bdelloid Rotifers. Matthew Meselson, Harvard

**3 May EMBL Heidelberg**  
**EMBL Distinguished Visitor Lecture:** How the ER gets into shape. Tom Rapoport, Harvard

**3-5 May EMBL Heidelberg**  
**Conference:** The 6th Annual BioMalPar Conference

**5-7 May EMBL Hamburg**  
**EMBO Conference:** Catalytic mechanisms by biological systems: at the interface between chemistry and biology

**12-15 May EMBL Heidelberg**  
**Conference:** Stem Cells, Tissue Homeostasis and Cancer

**17 May EMBL Monterotondo**  
**EMBL Distinguished Visitor Lecture:** Differentiation and transduction in *C. elegans* mechanosensory neurons. Martin Chalfie, Columbia University

**18 May EMBL Heidelberg**  
**Cell Architects Symposium:** Using micropatterns for quantitative cell analysis

**18-21 May EMBL Heidelberg**  
**EMBO Workshop:** Advanced light microscopy techniques and their applications – 10th International ELMI Meeting

**25 May EMBL Heidelberg**  
**Science and Society:** The cultural authority of science across Europe and beyond. Martin W. Bauer, LSE

**2-5 June EMBL Heidelberg**  
**EMBO Conference:** Microtubules – structure, regulation and functions

**4 June EMBL Monterotondo**  
**Science and Society:** Who is the Modern Scientist? Steven Shapin, Harvard

For more details about these events and more, visit [www.embl.org/events](http://www.embl.org/events).

## people@EMBL

**Ewelina ten Cate-Zapala** has taken over from Angel Chong in the Petty Cash office at EMBL Heidelberg. Originally from near Krakow, Poland, where she studied Polish literature, Ewelina worked in finance in Ireland and at Ericsson in the Netherlands before coming here. “Although this has been a country move, the international environment at EMBL feels very familiar,” she says. “I’m used to working with a team of people from all over Europe, so it’s great to have that chance here in Germany too.”



### In at the deep end

This year’s EMBL Heidelberg Diving Club trip took them to the Revillagigedo- or Socorro-Archipelago in Mexico. This marine reserve of remote volcanic islands in the Eastern Pacific is far offshore, so the 14 EMBL divers ate, slept and lived on the boat for the adventure.

“We dived with giant pacific manta rays, which can grow

to 6.5m across, and they’re so tame that you can touch them,” says postdoc Jan Medenbach. “We also saw large numbers of humpback whales and several types of shark, including silkies, Galapagos, white tips and even large schools of rare hammerheads.”

The fragile environment, home to many endangered species, even suffered an earthquake while the club was at sea. “We heard the tsunami warnings, stopped all diving operations and prepared for the worst, but we were so far from shore that the wave was really small,” says Jan.

Photos: Jan Medenbach

## awards&honours

Predoc **Evangelia Petsalaki** has been awarded the Wilma Moser Prize from Heidelberg University for her PhD thesis, ‘Prediction of peptide-protein interactions and their structures’. Evangelia left EMBL in January to take up a postdoc position at the Samuel Lunenfeld Research Institute at Mount Sinai Hospital in Toronto.

EBI Director **Janet Thornton** has been awarded a Genome Valley Excellence Award by Chief Minister Konijeti Rosaiah of Andhra Pradesh in India in recognition of her exceptional contribution to research in the life sciences. The award was presented at BioAsia 2010, Asia’s most prestigious and widely attended biobusiness forum, in Hyderabad in February.

EMBL-EBI research group leader **Paul Bertone** and his colleagues at the University of Cambridge have received a Japan Partnering Award from the UK’s Biotechnology and Biological Sciences Research Council. The award will assist Paul’s team, who work on pluripotent stem cells, to collaborate with RIKEN scientists led by Hitoshi Niwa in Kobe, Japan.

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