The Newsletter of the European Molecular Biology Laboratory

EMBL etcetera

Issue 54 • December 2009 • www.embl.org/newsletter

Out with a bang

Christmas is fast approaching, but that hasn't stopped the plethora of great scientific papers that's been coming out of EMBL lately. In a Structural and Computational Biology Unit project, several groups have published in *Science* about the first comprehensive picture of a minimal cell (page 2); Mathias Treier's group's 'gender-bending' mice appear in *Cell* (page 9); Jan Ellenberg's group has revealed that fractals could be useful tools to describe the behaviour of molecules in the nucleus (page 9); and Nadia Rosenthal's group has linked a key signalling pathway to heart development and healing (page 5). Meanwhile, Toby Gibson has been courting controversy with his opinions on over-simplified perspectives in *TiBS* (page 8).

When a monk came to EMBL

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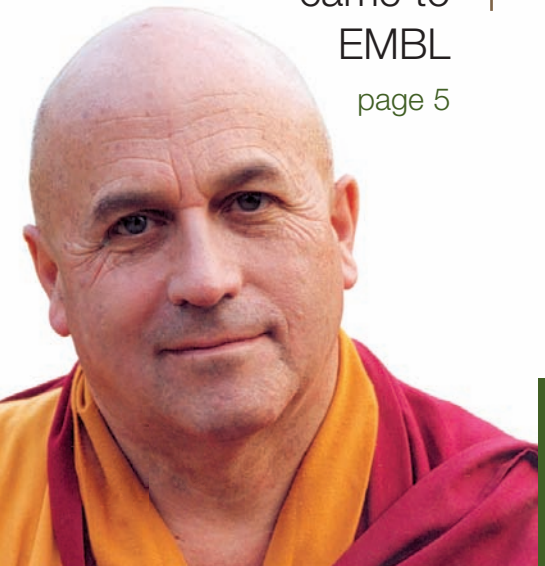

Bernd-Uwe retires

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After eight years at EMBL, administrative director Bernd-Uwe Jahn retires at the end of 2009. The man described by Chair of Council Eero Vuorio as "a warm-hearted connoisseur of wine and good food with a great sense of humour", as well as someone "with a thorough knowledge and understanding of the rules and procedures of Council and the laboratory, who could be depended on for immediate and correct answers" tells Lena Raditsch about his future plans.

Winter Council meeting: outcomes

Intermedex adjustments, longer postdoc contracts, and some dates for your diaries...

In EMBL's final Council meeting in 2009, which took place in Rome, delegates welcomed some new faces as well as saying goodbye to some old ones. They made decisions about the future ratio of EMBL Health Insurance Scheme contributions, the length of postdoc contracts at EMBL and some new equipment for GeneCore. During the next few months EMBL will be busy preparing the new five-year Programme for the period 2012-2016, which Council uses to decide on EMBL's budget. More on page 2.

Photo: Marietta Schupp

Intermedex adjustments, longer postdoc contracts, and some dates for your diaries...

Winter Council meeting: outcomes

EMBL's Winter Council meeting took place in Rome on 24 November with the following outcomes.

Health insurance

As of 2010 the ratio of EMBL Health Insurance Scheme contributions will change to a third for employee and two thirds for employer – as was the case prior to 2003 – which means that the contribution paid by staff increases by 0.1% of basic salary and by 2.1% for EMBL. Additionally, new provisions on additional reimbursement, physiotherapy and kinesitherapy, and dental prostheses and dentofacial orthopedic treatment will apply on all treatment taken after 1 January. All medical bills should be sent directly to the patient for authorisation before payment by Intermedex.

ATC opening

The official opening ceremony for the ATC, to which science ministers of the EMBL member states, EU representatives and other stakeholders have been invited, has been scheduled to 9 March.

Postdoc contracts

EMBL Council decided to increase the standard initial period of EMBL postdoc contracts from one to two years and to extend the maximum normal duration of the fellowships from four to five years.

EMBL programme

The production of the new five-year EMBL Programme 2012-2016 – the document that details the plans of all EMBL activities, including research, services, training, outreach, technology transfer, administration and EMBL's function in the European research landscape – has begun. Based on this document and the corresponding Indicative Scheme, Council will decide on EMBL's budget for the period in 2011.

SAC reviews

The next SAC reviews are scheduled on 30-31 March for the Core Facilities in Heidelberg, 5-6 May for Heidelberg's Structural and Computational Biology Unit and 7-8 May for the review of the EMBL Programme 2012-2016. Two new SAC members, Reinhard Jahn and Tom W. Muir, have been elected to replace Herbert Jäckle and Werner Kühlbrandt.

Other news

The Genomics Core Facility has permission to purchase two new generation genome analyser sequencing systems to meet the strong demand for this technology.

ELIXIR, the project led by EBI Director Janet Thornton that aims to develop a pan-European infrastructure for biological information, will be supported by a consortium of member states. Two have made financial commitments; the UK awarded £10m, and the Swedish Research Council will give €1.7m over three years.

Babis Savakis (Greece) stepped down as Chair of EMBL Council and Eero Vuorio (Finland) was elected as new Chair. Annemarie Frischauf (Austria) was re-elected as Vice Chair and Reinhard Lührmann (Germany) will replace Juan Modolell (Spain) as second Vice Chair.

Collaboration reveals what a self-sufficient cell can't do without

A collaboration of EMBL scientists past and present have produced the first comprehensive picture of a minimal cell, based on a quantitative study of the bacterium *Mycoplasma pneumoniae* that causes atypical pneumonia – and found that even the simplest of cells is more complex than expected.

In three papers published back-to-back in *Science*, research groups from the Structural and Computational Biology Unit – including the Russell, Böttcher and Frangakis groups – in a partnership with the Centre de Regulacio Genómica (CRG) in Barcelona, uncover the indispensable ingredients required to produce a cell that can survive on its own.

Left: Peer, who recently received the Royal Society and Académie des Sciences Microsoft Award

Led by EMBL's Peer Bork and Anne-Claude Gavin, together with EMBL alumnus and head of the Systems Biology Department at CRG Luis Serrano, the groups studied *M. pneumoniae,* one of the smallest prokaryotes, complex enough to survive on its own yet simple enough to represent a minimal cell – and to enable a global analysis. "We found features that not even the simplest organism can do without and that have remained untouched by millions of years of evolution – the bare essentials of life," says Anne-Claude.

Remarkably, the regulation of this bacterium's transcriptome is much more similar to that of eukaryotes than previously thought; and although its genes are arranged in groups, as is typical of bacteria, *M. pneumoniae* can selectively express or repress individual genes within each group.

Additionally, its metabolism doesn't appear to be geared towards multiplying as quickly as possible, perhaps because of its pathogenic lifestyle; another surprise was the fact that, although it has a very small genome, the bacterium is incredibly flexible and readily adjusts its metabolism to drastic changes in environment. These are features it shares with more complex organisms.

"Within EMBL's Structural and Computational Biology Unit we have a unique combination of methods, and we pooled them all together for this project," says Peer.

Right: Bernd-Uwe (second from right) and two of his sons and daughters-in-law enjoying a skiing holiday

Retiring administrative director Bernd-Uwe Jahn tells Lena Raditsch about his mixed emotions on leaving EMBL

"I enjoyed my time at EMBL enormously"

Bernd-Uwe throws open the door and with a wide, welcoming gesture, invites me to take a seat. It's a familiar scene in the DG office: even in frantic times he folds his arms behind his head, starts with a chat and unhurriedly listens to your questions.

"I had quite a good idea what to expect from EMBL, and actually that's why I applied for the job in the first place," he tells me. Long before coming to EMBL in 2001, Bernd-Uwe began his career in the German Federal Ministry for Research and Technology. During this time he served as the German delegate not only on EMBL's council but also on the governing boards of CERN, ESO, ILL and ESRF.

"Directing the adminstration at EMBL was a logical step with which to finish my career, and it was also a most enjoyable way to do so." Although Bernd-Uwe was always proud of being a civil servant in the ministry he greatly appreciated the working conditions at EMBL which allowed him to successfully shape the administration in a positive and constructive environment. During his time, new personnel and financial systems were implemented and processes now run much more smoothly, providing useful and valued services to the scientists. "Before I came to EMBL I held the same position at the Hahn-Meitner Institute in Berlin," he says. "I wouldn't have wanted to go back to my previous role in the ministry."

When I ask him what he expects from his time after EMBL and from his retirement, he can't hide a certain melancholy. "If I hadn't reached retirement age maybe I'd have stayed a little longer." He mulls it over. "No – it's better to leave with acceptance."

On the other hand, there are plenty of things he's looking forward to. "For too long, I've neglected my health and fitness, and finally I will have the time to go for walks or go swimming," he says. "I love gardening, so by the time I've managed to prune my trees and bushes, I'll be fit anyway!"

His professional life often entailed lots of travelling, staying away from home and his family – and Bernd-Uwe is a real patriarch. "I've got three sons and a daughter, and six grandchildren with number seven soon to arrive," he smiles. "I won't be travelling anymore; I'll stay at home, and we'll eventually move back to the family home near Bonn. I want to spend as much time as I can with my growing number of grandchildren."

He seems to find his peace of mind enjoying the simple things in life. "There are so many beautiful places for excursions nearby, and what I like best is visiting a nice castle after a long walk and stopping for a bite to eat and a decent glass of wine." And who would blame him?

Everyone is welcome to attend Bernd-Uwe's farewell party in the ATC on 8 March. See page 11 for more details.

EMBL intranet: we want your news!

Got some news to convey to the EMBL community?

A new section on the intranet portal page is now being used for internal news (see the 'News' section on the left hand column on **http://intranet.embl.de/index.php**). More immediate and flexible than the newsletter, it offers a further opportunity to present your news to the rest of EMBL.

As scientific stories are already covered in the Press Releases section, the types of articles covered in News might include retreat announcements, building inaugurations, awards and achievements, new people at EMBL, or announcements about new initiatives or services. The news appears on the intranet pages at Heidelberg, Grenoble, Hamburg and Monterotondo, so articles of interest to the entire EMBL community are ideal.

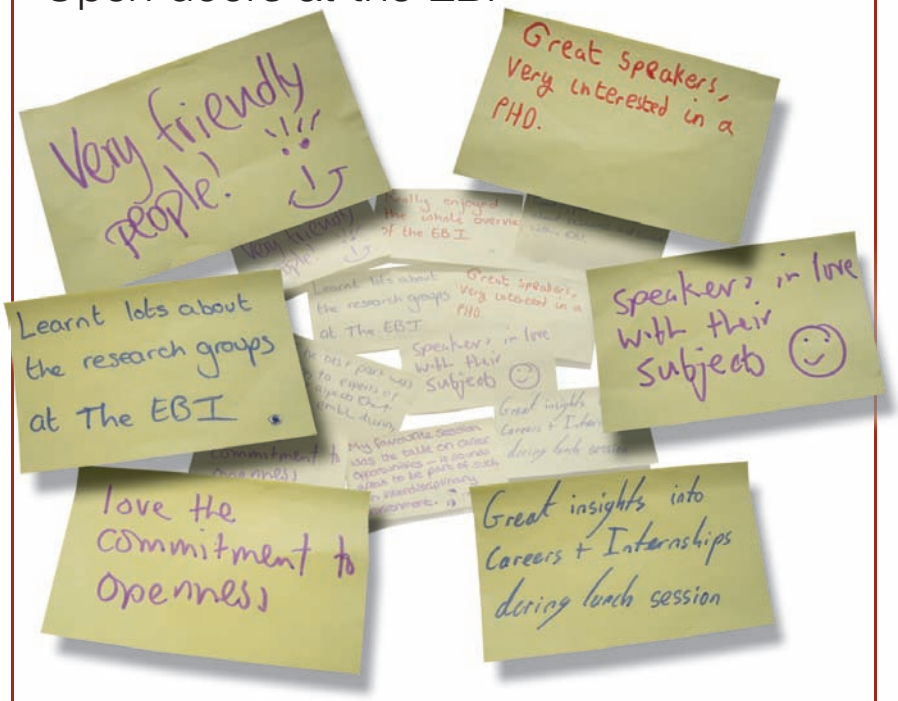
Each story is flagged on the intranet portal page for a day or two until it is replaced with a new one, and all stories end up in an archive page for an at-a-glance round-up of recent events (**http://intranet.embl.de/communication_outreach/internal_news/index.html**).

If you have any news that should be considered for the EMBL intranet, please write to info@embl.de.

Also required: pictures please!

If you have any submissions for the EMBL intranet's Picture of the Day, please also send them to info@embl.de. They need be vaguely EMBL-related and from any outstation or EMBL location, and preferably in landscape format (they'll be 180px x 80px on the web). Perhaps you have a cool scientific image, or a snapshot of a recent EMBL get-together? No full-frontal nudity please!

Open doors at the EBI



More than 30 students and early-stage researchers gathered at the EMBL-EBI Open Day on 3 November to enjoy a series of interactive talks and presentations about the EBI's cutting edge research, services and working environment. The visitors gained an insight into life at the EBI from PhD student Heidi Dvinge and attended an engaging talk on bioinformatics career opportunities from Dean of Graduate Studies Helke Hillebrand. The popular lunchtime demonstration session also gave visitors the chance to quiz the experts face-to-face on the EBI's core resources. Comments were captured on post-it notes (above), allowing the EBI's Outreach and Training team to monitor which aspects of the day the visitors most enjoyed.

The Open Day is ideal for young scientists or anyone else who is keen find out more about the EBI's activities, or who wants to explore career opportunities in bioinformatics. The next will be held on 4 March 2010. To register, please visit www.ebi.ac.uk/training/openday.

A GIANT undertaking

EMBL Grenoble's campus, the Polygone Scientifique, is to be developed into a world-class science and technology park – an 'ecosystem' of innovation – in an initiative supported by the French government.

GIANT's first construction projects are already underway and mark the beginning of a €500m overhaul for the area, which has long boasted a top-class research infrastructure which includes the ESRF, the ILL, EMBL and the CNRS, as well as three centres of technological excellence and several high-level university programmes.

With the planned new teaching and research buildings, recreational facilities and meeting places for researchers, transport links and sustainable housing, it is projected that the site will welcome 20,000 scientists and students and 10,000 inhabitants by the year 2015.

The entrance to the site will also feature a Visitors' Centre, which will present the work of all the campus' scientific institutes to the growing numbers of interested members of the public using videos, models and interactive exhibits.

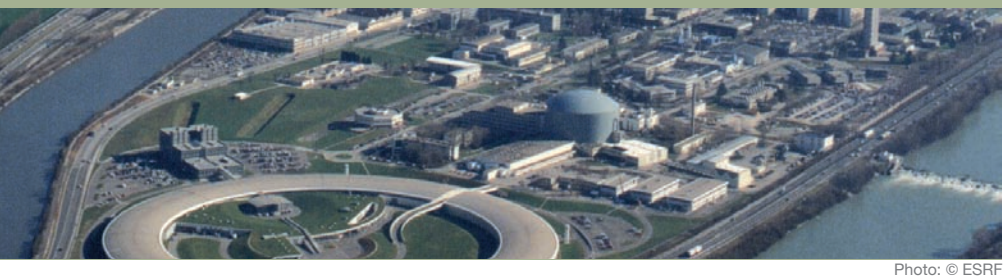


Photo: © ESRF

Quantity *and* quality

Would you want to live a longer life? If you could avoid some of the potential downsides to ageing, such as weaker bones and memory loss, perhaps. Recent research at University College London (UCL) and EMBL-EBI has provided an insight into the biological pathways that can influence longevity and healthy ageing. In a study mimicking the effects of calorie restriction, scientists reared long-lived mice that were fitter and suffered fewer age-related disorders than ordinary mice.

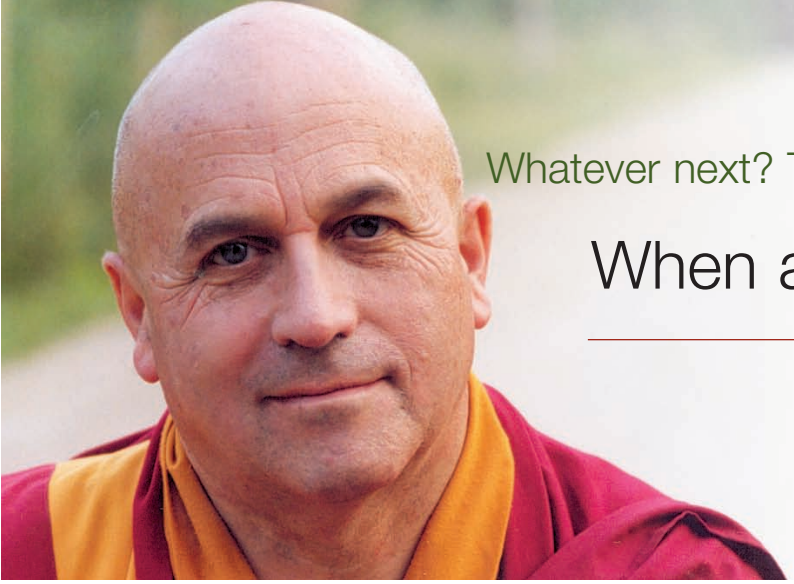
The UCL researchers bred mice that were unable to produce S6 Kinase 1 (S6K1) – a key protein in a nutrient-sensing pathway that enables them to respond appropriately to changing food levels. The crucial link between changes to this pathway and the effects of calorie restriction was confirmed by researchers in Janet Thornton's group at EMBL-EBI, who found that the patterns of genes that are switched on or off in the mice lacking the S6K1 gene were similar to those seen in ordinary mice that have been fed a calorie-restricted diet.

> Even their immune systems appeared more 'youthful'

In contrast to wild-type mice, females lacking S6K1 had a 20% longer lifespan, a leaner body – despite actually eating more – and stronger bones. They were less likely to develop type 2 diabetes and had better balance, strength and coordination. They were also more inquisitive, and even their immune systems appeared more 'youthful'.

These results, published on 2 October in *Science*, suggest that disrupting the S6K1 pathway can lead to longer lives and healthy ageing, at least in females: males didn't live longer, but they did experience many of the same health benefits.

If mice can live longer, why not humans? Although this would be challenging to study experimentally, bioinformatics could continue to provide useful insights; comparisons of the pathway in mice and humans could shed light on whether they share similar mechanisms, for example. Looking further forward, software may one day be able to model how calorie restriction may affect humans, or to search for potential drug targets in the S6K1 pathway that could assist healthy ageing. "The molecular basis of ageing is still far from understood, but it is clear that bioinformatics will be an important tool to unravel the complex pathways and networks involved," says Janet.



Whatever next? The Dalai Lama's French interpreter!

When a monk came to EMBL

Following his Science and Society Forum lecture, 'Train your mind, change your brain' at EMBL Heidelberg, Angela Michel and Marlene Rau caught up with Buddhist monk Matthieu Ricard to talk about science, Buddhism...and how to be happy

How did you become a monk in a Buddhist monastery in Tibet?

I was doing a PhD [in Nobel-prize winner Francois Jacob's lab] when in 1967 I went to India for the first time. I went back and forth for many years, and then slowly realised that it was where I wanted to be. It was like self-discovery. I decided that I wanted to live in the Himalayas, and I was 30 when I decided to become a monk.

How did you become the French interpreter for the Dalai Lama?

He was my teacher's student. Once I happened to be with him in France and he had to speak in Tibetan to his English translator and someone else would translate it into French and he said, why don't you do it? So I became his interpreter.

You've gone back to science to take part in some neuroscientific experiments. How did that come about?

Some people from the Mind and Life Institute [in Boulder, Colorado] approached us. Their research projects investigate the neurobiological effects of meditation on long term meditators, and when the scientists asked me to volunteer I said yes. The Dalai Lama hadn't known I was a scientist myself until then.

How did it feel then to go back to the lab?

Frankly, it was mostly fun. I only do the interesting parts; they spend months analysing the data and I don't have to do anything. I don't have to apply for grants. I take part in the exciting parts and not the tedious ones.

How would you describe the relationship between Buddhism and science?

In some religions, some truths of science don't work. The universe being created in seven days is a big problem for science. We don't have anything like that. The Buddhists added cosmology, which was borrowed from the Hindus – not a big deal. If it doesn't fit, so what? We drop it, no problem – nobody minds. The main thing is about the mind, about changing the mind and the science of mind. We're looking for truth – we're not trying to prove that a particular truth is the truth. That's why Buddhists feel very comfortable with scientists.

You were once labelled the happiest person in the world.

That's just a headline. It's just the gamma wave when you meditate on compassion. It was after an experiment with 15 subjects, and I wasn't even the one with the highest amplitudes measured – I just happened to be the first. Of course I have a higher amplitude than most other subjects, but it has nothing to do with happiness.

Is there anything that really annoys you?

You can feel indignation sometimes at people not doing what is right, but not in a negative way; you don't want to harm anyone, for sure. Sometimes I get a bit anxious, like when I nearly miss a plane – but so what? There's not much you can do, so why worry?

What's your cure for a negative emotion?

Well, it's rejoicing, or at least not being affected by it in your own freedom. Don't be caught up in it. If you're jealous of someone because of their success it doesn't diminish that success – it just affects *you*, making you the victim. You just need to free yourself from that.

From fruit fly wings to heart failure – why Not(ch)?

EMBL scientists have been the first to link a key signalling pathway to heart development and healing, indicating that it may play an important role in heart attack recovery.

Almost a century after it was discovered in fruit flies with notches in their wings, the Notch signalling pathway – a molecular mechanism through which cells communicate – has been proven to target heart muscle cells.

Scientists in head of outstation Nadia Rosenthal's group used genetic mouse models to uncover critical roles for this pathway. When they inactivated Notch specifically in the heart muscle precursor cells of early mouse embryos, the scientists discovered that the mice developed heart defects. Curiously, increasing Notch signalling in the heart muscle cells of older embryos had the same detrimental effect, uncovering different requirements for Notch as development proceeds.

"The cardiac malformations we observed are characteristic of Alagille syndrome, a human congenital disorder," says Paschalis Kratsios, first author on the paper published online on 10 December in *Circulation Research*. "Therefore, our findings could help to explain the cardiac symptoms associated with Alagille syndrome and related forms of congenital heart disease."

Intriguingly, the scientists were able to improve the cardiac function and survival rate of adult mice that had suffered heart attacks by re-activating Notch, suggesting new therapeutic approaches to help the heart recover from damage.

"Overall, these results highlight the importance of timing and context in biological communication mechanisms," concludes Nadia Rosenthal. "Our findings also lend support to the notion that, in certain situations, redeployment of embryonic signalling pathways could prove beneficial for tissue regeneration in the adult."

The great and the good

You may have noticed a strange new installation in the EMBL Heidelberg canteen one day last month; a screened-off area away from the hoi polloi (that's you), behind which some very important people in suits were having their lunch.

The day was 19 November, the occasion was the EIROforum DG assembly, and the bigwigs were the leaders of the seven intergovernmental research organisations that comprise EIROforum (EMBL, CERN, ILL, ESRF, ESA, ESO and EFDA-JET).

The meeting was held at EMBL because it is the institute's turn as EIROforum chair until 10 July. The directors meet twice a year to discuss EIROforum business, and this get-together was especially important as it coincides with the preparation of the renewal of the partnership's Statement of Intent with the European Commission, which outlines the joint activities and plans for the ongoing collaboration.

Other issues discussed were the partners' needs in relation to the new EU framework programme, FP8, which will succeed FP7 in 2013. One of the ways in which EIROforum is most effective is as a combined voice in interactions with the EC and other organs of the European Union.

Also discussed was the future of the EIROforum-funded journal for science teachers, *Science in School*, which is produced at EMBL. Later, the DGs presented some scientific highlights from their institutes, with EMBL DG Iain Mattaj citing some of the year's achievements by Lars Steinmetz and Andreas Ladurner in particular.

The EIROforum collaboration began in 2002 and involves Europe's seven most influential intergovernmental scientific research organisations – the vanguard of European science – with the primary goal of promoting the quality and impact of European research.

With research collaborations, conferences, technology exchange and outreach initiatives – such as *Science in School*, Science on Stage (see box, right) and the new EIROforum Teacher School series, the first of which recently took place at CERN – the partners mobilise their expertise in basic research and in the management of large international infrastructures to benefit European research and development.

Stage two

The future of one of EIROforum's most successful initiatives, Science on Stage, was secured in October. Its international committee decided that the network of local, national and international events to identify innovative science teachers and exchange ideas and activities would continue even though the EC grant has expired.

"I'm delighted that Science on Stage has gained so much momentum," says Eleanor Hayes, who represented EIROforum at the meeting. "In future, the national organisers will pass the flame, competing to host the international festival every two years." The next festival will be in Copenhagen in April 2011.

www.science-on-stage.eu

Photo: Marietta Schupp

EIROforum members go Tech Transfer

There were more sharp suits than ever before in the Operon on 18-19 November for the EIROforum conference on Technology Transfer and the European Research Area, which was funded by an FP7 grant from the EC. Politicians, representatives from industry and members of the European Commission, the European Investment Bank and the European Patent Office gathered with technology transfer professionals and decision makers in the EIROforum member institutes, scientists from EMBL and other research communities for the two-day look at the business side of the scientific world.

Topics covered included technology transfer (TT) setup requirements and EC recommendations, as well the status of the EIROforum organisations. Martin Raditsch of EMBLEM, EMBL's TT company, summarised that three of the EIROforum institutes have their own tech transfer organisations, one is outsourcing, and two of the remaining three have policies already in place to allow such activities to be developed. EU representative Tiit Jurimae acknowledged the importance of TT and advised that funding for it should be provided as part of a research institute's basic budget.

There was also time for some news from EMBL's spin-out companies. Joe Lewis, Head of EMBL's Chemical Biology Core Facility and co-founder and CEO of Elara Pharmaceuticals, announced that the business had received an additional €2m from the BMBF GOBio and the Biotechnologie Rhein-Neckar Spitzencluster programs, leading to total funding of €4.6m.

"It was a good networking opportunity, and interesting to hear about the other EIROforum members' TT organisations compared to EMBLEM, confirming its good standing," commented attendee Jürgen Zimmermann, robotics engineer in the Genomics Core Facility.

BM14 approved

A consortium of EMBL, the European Synchrotron Radiation Facility (ESRF) and the Indian government will take over the running of the BM14 beamline at the ESRF in Grenoble for five years.

ESRF's Council officially gave the plan the go-ahead at their meeting on 30 November, and from 1 January the bending magnet beamline and MX experimental station will be run jointly by EMBL, ESRF and the Indian Department of Biotechnology when an existing contract with the MRC ends.

The agreement guarantees the continuation of this state-of-the-art Multi-wavelength Anomalous Diffraction (MAD) beamline, and will strengthen links with the Indian MX community.

The spirit of Christmas

With Christmas just around the corner, we spoke to some EMBL alumni who help bring festive cheer to the dinner table...

Maj Britt Hansen

Then: *Photographer in EMBL Heidelberg's photolab, 2001-2006*

Now: *Freelance photographer, mbhstudios.com and vinter, Ökologisches Weingut Klaus Vorgrimmler, Freiburg*

"Winemaking runs on a yearly rhythm, which starts in January with the cutting and tying of the vines for the new grapes. Cultivating the soil is a constant job from March to November. In May and June the vines flower, and harvest time – fun but very stressful – usually starts in October. Afterwards our work moves more to the cellar until the following year when the wine is bottled. We're a small, family business; we do all our work by hand and use the natural resources around us – which is why you always have to stay one step ahead.

These two lifestyles work quite well together, as the busy times for the photography usually fall outside the busy times with our wine. The time I spend in the vineyard gives me inspiration and a new way to look at my creative work."

Angus King

Then: *Postdoc, Intrumentation, 1997-1998*

Now: *Cadenhead's Whisky Shop, Odense.*

"After EMBL I went into biotech, but when my wife started the whisky shop and asked me if I wanted to join, I jumped at the chance. We have a franchise on products from Cadenhead's, the oldest independent bottler in Scotland, and we're the only retail outlet for them in Denmark. We specialize in niche products such as single cask and cask-strength whiskies. The most rewarding part of the work is actually people-orientated. Being appreciated for our service and advice is a great boost to moral.

Whether it's biotech or any other sort of business, the basics of setting one up are the same; of course, you need to have some expertise. I'm the only Scottish person selling Scottish whisky in Denmark, so my credentials are OK!"

Rosanna Maccagnano

Then: *Senior Administrative Officer, EMBL MR, 1998-2007*

Now: *Research Training & Development Manager at GeoScience, University of Edinburgh, and pub landlady*

"Returning to our Scottish roots after almost 10 years in Italy, Alex [Regan – formerly technical assistant at EMBL Monterotondo] and I moved into the Staghead Inn, Fife, in February 2008. The pub was built in 1610 and is steeped in history, mainly involving our resident ghosts! I run the restaurant at weekends when I'm not at my job at Edinburgh University, and the rest of our family helps out too.

The Staghead is the focal point of the village. The first customers to walk in were Bob (affectionately known as one of the original grumpy old men) and Stewart, a brash, affable Glaswegian; they continue to make us feel at home. Another of our customers, JJ, flew over to Rome to play the bagpipes in full Scottish dress for EMBL Monterotondo's Christian Fasci's wedding. We hold karaoke and Celtic folk music events, and we have a very successful pool team!"

The spirit of Christmas continued

Freddy Frischknecht

Then: *Predoc, Cell Biology and Biophysics, 1996-2000*

Now: *Group leader, Heidelberg University Medical School, and Schnapps maker*

Freddy and friend Maik Lehmann handing out Schnapps as poster prizes at a conference

"When I'm not making the Frischknecht Schnapps – it's a family tradition – I work on the motility of malaria parasites. It's interesting to note that malaria parasites are essentially inhibited by Schnapps, but you need a lot; at the concentration that it's bad for the parasite it kind of inhibits the drinker.

Making Schnapps is easy: you collect whatever fruits you have – 2009 was great for cherries – put them in a barrel, and let them rot. Occasionally you open the barrel and take a big breath – totally gorgeous! You get drunk even without drinking if the Schnapps is good. The Frischknecht one is absolutely biological. There's no chemistry in there; just lots of biochemistry, though, from the good bugs. But watch out for the *Drosophila* (a totally overrated model organism). Sometimes thousands fly out of a barrel when you open it."

Everyone welcome: March's alumni reunion

You can try Maj Britt's, Angus' and Freddy's wines and spirits – or win a three-course meal at Rosie's pub –at the next EMBL staff/alumni reunion on 8 March at EMBL Heidelberg's new Advanced Training Centre (ATC), to which all EMBL and EMBO staff, alumni, Council and SAC members are invited.

The programme will include life sciences and science and society talks, as well as an EMBL and alumni association update. Social highlights include an exhibition, a tombola of personal and EMBL-related objects donated by alumni, and a tour of the ATC including the Matti Saraste courtyard.

A programme and an online registration link will be sent to staff and alumni early next year. Meanwhile visit the website at **www.embl.org/alumni/reunion** for details.

The event will be followed by the official ATC opening ceremony on 9 March.

Graphic: Petra Riedinger

Graphic: Petra Riedinger

Every drop counts!

A big thank you to EMBL alumni and staff, the Alumni Association board and leadership for raising €2,000 to run the John Kendrew Award in 2011. We are delighted with the worldwide response to this campaign, which was launched in October this year. Donations were received from ten European countries, Australia, the United States and Canada.

Based on the success of this campaign, we are confident that by 2012 it will be possible to offer the John Kendrew Award indefinitely. If 25% of EMBL alumni (1,000 people) donate an average of €50, we could cover 75% of the €65,000 required to fund this award in perpetuity.

We hope you will join us in our goal to recognise and reward more young scientists' excellent research and science communication through your continued support. All donors are listed on our "thank you" page. Please visit our website at **www.embl.org/kendrewaward** to see how you can get involved.

Many thanks for your interest and help.

– Giulio Superti-Furga

A long night for Hamburg

When EMBL Hamburg scientists stay up all night, you can usually find them either slaving away at the beamlines or hitting the bars on the Reeperbahn.

On 7 November, though, they mucked in to do the graveyard shift in the name of outreach and education, when they took part in the city's third Nacht des Wissens (Night of Sciences).

The twelve-hour event saw all Hamburg's major research organisations and universities open their doors to the public, with a special shuttle service ferrying the baying crowds from place to place. The occasion coincided with campus partner DESY's 50th anniversary, so their special events meant that the site – and EMBL Hamburg's stand – welcomed no fewer than 13,000 visitors in the space of one evening.

The EMBL team, who set up camp at the site of their new PETRA beamlines, presented several technological developments including a live linkup to the MARVIN sample changing robot, which visitors could steer remotely, and a BioSAXS sample changer which was programmed to pour colourful dyes.

"It was exhausting," says Rosemary Wilson, EMBL Hamburg's Scientific Training Officer. "People were flocking to the stand to have a go at our crystallisation experiments and to play the interactive games to learn more about DNA and amino acids. There were entire families with children there right up until the finish, which was long past midnight, enjoying our kids' activities like making DNA helices from gummy bears. We sacrificed about 15kg of bears for that, and everyone who helped out said that they had lots of fun."

The Petra III hall was lit up for the occasion

Petra III inaugurated

On 16 November Prof Annette Schavan, Germany's Federal Minister for Education and Research, helped push PETRA III's 'on' button to inaugurate the world's most advanced synchrotron radiation source.

For the past two-and-a-half years, EMBL Hamburg's campus partner the German Synchrotron Research Centre (DESY) has been upgrading its beamline facilities to provide modern, world-leading services. Out of PETRA III's 14 beamlines, three are being designed and built by EMBL. Now, the completion and launch of the PETRA III ring promises to make DESY and EMBL global competitors in structural biology.

Minister Schavan joined Prof Jürgen Mlynek, President of the Helmholtz Association, Dr Herlind Gundelach, Hamburg's Science Senator, and DESY Director Prof Helmut Dosch to start the 1,150 magnets running. "The collaboration between physicists, biologists and infection researchers offer great opportunities for medical applications," she said.

Thomas Schneider and Stefan Fiedler's teams at EMBL Hamburg are constructing beamlines for small angle X-ray scattering on solutions and X-ray crystallography on crystals of biological macromolecules, which will operate at a new integrated facility for structural biology (**www.embl-hamburg.de/services/petra**). "After a period of internal testing we look forward to welcoming the first users in the second half of 2010," says Thomas.

Putting the pieces together...and bringing the east to the west

This year's EMBL International PhD Symposium on 29 October, 'Puzzles in Biology - putting the pieces together', drew more than 200 participants, some from as far afield as Armenia, Israel and even India.

The list of excellent speakers included Kim Nasmyth, Pierre Chambon, Stefan Hell, the inventor of Stimulated Emission Depletion microscopy (STED), and Ari Helenius, winner of the 2007 Marcel Benoist prize, the highest research award in Switzerland. Topics covered how basic research can contribute to the understanding of human diseases and how diseases can give insights into basic biology; how collaborations and past results can help solve complex puzzles; and the promising new approaches and techniques set to transform the rate of progress in biology. The symposium also provided a platform for the presentation of the PhD Symposium Writing Prize, which this year went to EMBL-EBI's Diva Tommei for 'The Dark Side of Stem Cells'.

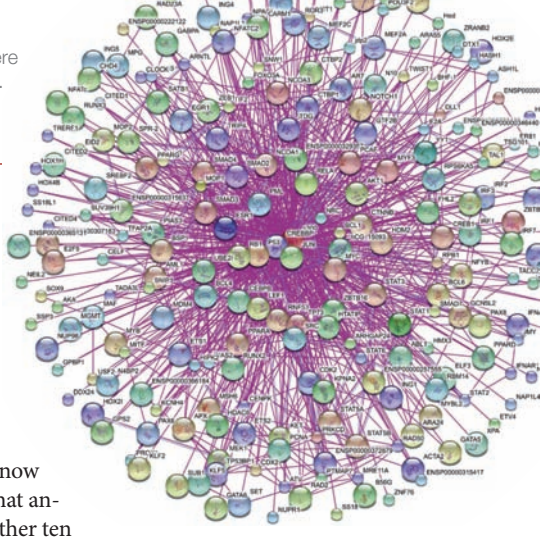
"There was a big change in organisation this year; there's no more grant, and it's a difficult time to find sponsors," says predoc Peter Blattmann. "Nevertheless, we attracted PhD students from around the world, as well as many prestigious speakers, and it was as very rewarding experience."

Diva receives the writing prize; left, the NIBB visitors with EMBL predocs

Photo: Christine Panagiotidis

"Organising it was exciting not so much from the scientific point of view but more from the personal," adds Boryana Petrova. "Investing effort in a concept and then seeing it unfold, with all its little problems and successes, gives you such satisfaction."

For the first time, the symposium was preceded by an NIBB-EMBL PhD Mini-Symposium, jointly organised by the EMBL PhD and Visitors Programmes. Ten predocs from Japan's National Institute of Basic Biology and Nagoya University presented their work with talks on genome dynamics, plant organ development and germ cell biology. "Our predocs did very well as hosts for the day, and really made the visitors feel at home," said Helke Hillebrand, Dean of Graduate Studies.



Right: "There are thousands of proteins which make hundreds of interactions; there may also be hundreds of proteins which make thousands of interactions". (Figure prepared with the STRING server (http://string.embl.de))

interview

Turn off those kinase cascades!

EMBL Heidelberg team leader Toby Gibson goes public with a crusade against the consequences of overly simplistic perspectives following the publication of an opinion piece in *Trends in Biochemical Sciences (TiBS)*

Toby, what's all this about?

It's an ongoing debate about the issue of oversimplification in biology. You have to be reductionist in science in order to be able to devise experiments. You need to fix many aspects of a system and then you perturb just one thing and see what happens. Later, you might forget that you've fixed so much that you're not invoking so many of the things that *could* happen – that could play roles in overall regulation – because you're only looking at one aspect.

Is this a new idea?

Physicist Niels Bohr considered truth and clarity to be complementary. The term co-operativity – multiple binding interactions that influence each other positively or negatively – is quite old. Classical biochemists working on enzymes have known about it for a long time. You can't have biological complexity without cooperativity, and you cannot have robustness without a complicated system. The only way to be robust is with complicated decision-making, not based on a single parameter.

What consequences does this have?

Firstly, that kinases cannot cascade. If you start seeing cell regulation as highly networked, highly cooperative and also highly redundant, then it's not hard to see that there's a need in certain parts of medicine for multi-drug therapy. Cancer cells remove cooperativity to simplify key pathways: They actually become less robust than healthy cells. With one drug you may kill most cancer cells; but in others, there'll always be mutations in there that can circumvent it and use another way to achieve the same thing. In multi-drug therapy, you try to hit everything that a cancer cell regards as important. If you knew enough about a cancer cell – not just that it gets a growth factor signal, but about its pathways that suppress apoptosis, and about its metastasis – and you hit the right pathways for this cancer, then you have a chance of knocking out the whole cell population. The corollary is that the healthy cells are more robust and may survive the therapy much better than the cancer cells.

So what can be done about it?

Currently, cell system models are too simple. If wet lab people don't tell the modellers that systems are cooperative, of course they won't model them that way. But people on the bench say 'I've just found that a binds to b, and that's all I need to know. I don't need to know that another ten molecules are binding to modulate that.' In fact you do, but they rather hope the system is simpler, because then they've understood it.

There's a story I like to tell: it's the inaugural lecture for the first ever cellular systems biology course. The eminent professor kicks things off with the old joke, "Bacteria are just a bag of enzymes!" The students are delighted: "Hey, I know how to model that." And so it has been ever since, the larger eukaryotic cells then simply being modelled as a bigger bag with some pockets in it.

How will you be addressing this issue?

There's a standard that defines how we put interaction data into the computer, and this has nothing about cooperativity in it, so we can't capture at the very first step that someone has found cooperativity. One of the things I'm hoping to do next year is to start working on that. I've already been talking to standards people at the EBI about it.

You can read Toby's article at **www.cell.com/trends/biochemical-sciences/fulltext/S0968-0004%2809%2900142-X**

How can we feed the world?

Scientists, journalists and politicians discuss the future of sustainable agriculture

A record number of 270 participants heard about the contribution plant science can make to the global challenge of food security in a growing world population at the EMBO/EMBL Science & Society conference on 6-7 November at EMBL.

The two-day event, 'Food, Sustainability and Plant Science: A Global Challenge' looked at food shortage, which – next to climate change – is the greatest challenge facing the world. To stay on top of the worldwide food supply for nine billion people in 2050, the production of staple crops has to increase by at least 50 per cent. Already today, more than one billion people in the world are hungry. The green revolution, which started in the fifties, tripled the world food production, but resulted in a dependence on very few strains of major food crops. What's worse, 40 percent of the arable land has become seriously degraded and infertile and biodiversity has sharply declined.

A farmer from the Indian state of Maharashtra in a field planted with genetically modified BT cotton

According to Sir David Baulcombe, University of Cambridge, the existing agricultural production system is operating close to full capacity. The threatened worldwide food supply calls for innovative technologies to breed new strains of robust and efficient plants: crops resistant to flooding, draught, salination and pests as well as high yielding crops enriched with micronutrients and vitamins. Pamela Ronald of the University of California, Davis, said: "There are not enough breeders in general. It's almost like where we were ten years ago with bioinformatics." Plant breeders and researchers deplore the lack of young scientists interested in these topics.

European public and policy makers largely ignore the impending crisis. As a consequence, public funding and support for plant and agricultural research are low and plant breeding is left to big industry that holds a quasi monopoly and most of the exclusive commercial rights. Sir David Baulcombe called for scientists to become political and alert policy makers and the public to the crisis. *– G. Wallon & Y. Kaul*

When biology meets maths

Research from Jan Ellenberg's group at EMBL Heidelberg has revealed that fractals – fragmented shapes made up of reduced-size copies of the whole – could be useful mathematical tools to describe the behaviour of molecules in the nucleus.

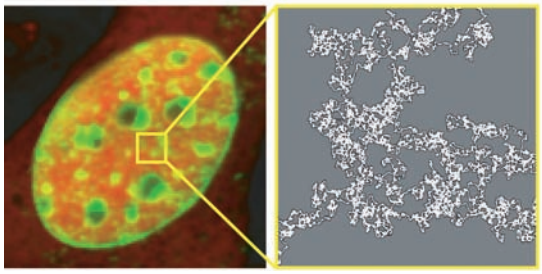
The nucleus of eukaryotes is enriched in DNA, proteins and RNA, and is thus thought to be a crowded area. *In vitro*, it has been shown that molecular crowding strongly affects protein dynamics but whether this is also relevant *in vivo* remains unclear. In a study published on 16 December in the *EMBO Journal*, postdocs Sébastien Huet and Aurélien Bancaud followed the movement of fluorescent molecules in living cells, and saw that they moved as if having to navigate obstacles. Comparing the pattern of movement of different-sized molecules, they found that large molecules moved according to the same rules as small ones.

This result suggested that these molecules were 'seeing' the same crowded environment, regardless of scale; that their environment, in fact, was fractal. "It's like a system of branched channels resembling a coastline," says Jan, who's head of the Cell Biology and Biophysics Unit.

The team then watched how different proteins moved and bound to euchromatin and heterochromatin. They found that euchromatin shows a high fractal dimension, which means it exposes a large, rough surface to the molecules. In contrast, heterochromatin's low fractal dimension makes it smoother and flatter, with a smaller exposed surface.

"This could help to explain how the cell tweaks the behaviour of the proteins that control DNA," says Sébastien. "The nucleus might be able to switch the way proteins look for targets on chromatin simply by altering the fractal structure of chromatin."

Left: A cell displays chromatin (green) and a molecule used for tracking (red). Right: A closer look at the fractal architecture of chromatin



Gender-bending mice

EMBL researchers have uncovered the gene responsible for keeping females female in a study published on 11 December in *Cell*.

In humans and most other mammals, an individual's sex is determined by its sex chromosomes: females have two X chromosomes, and males have an X and a Y. Scientists had long assumed that the female pathway – the development of ovaries and all the other female traits – was the default: if an embryo had a gene called *Sry*, which is located on the Y chromosome, it would develop into a male; if not, then the result would be a female.

A gene called *Foxl2*, which is located on a non-sex chromosome and therefore present in both sexes, was known to play an important role in the female pathway, but its precise function remained elusive. When Mathias Treier's group turned off this gene in the ovaries of adult female mice, they found that cells in the ovaries turned into cells typically found in testes.

"We were surprised," says Mathias, who collaborated with colleagues from the MRC's National Institute for Medical Research (NIMR), in Mill Hill, UK, for the study. "We expected the mice to stop producing oocytes, but what happened was much more dramatic: somatic cells which support the developing egg took on the characteristics of cells which usually support developing sperm, and female hormone-producing cells switched to the male type." This challenges the long-held assumption that the development of female traits is a default pathway, showing that the male pathway needs to be actively suppressed, and also grants a valuable insight into how sex determination evolved.

These findings will have wide-ranging implications for reproductive medicine and may help to treat sex differentiation disorders in children or understand the masculinising effects of menopause on some women. The study is discussed by Mathias in a *Cell* 'PaperFlicks' video on YouTube at **www.youtube.com/watch?v=-oL7RKUNchY**.

obituary

We regretfully inform the EMBL community that our colleague, Göran Wikell, died on 21 November in Heidelberg.

Göran came to EMBL in 2001, first as part of the Swedish Audit Group for EMBL, EMBC and EMBO and then, as of 2004, as an external Auditor for EU Grants. Between 1969 and 2005 he held various senior positions at the Swedish National Audit Office.

Göran was a highly regarded professional with a strong sense of duty and commitment. He quickly grasped the spirit of EMBL and embodied it in his work and actions, and we had the privilege to know Göran as a kind and helpful colleague with a good sense of humour. He will be greatly missed.

Flu fighter

A new EMBL spin-out company, Savira Pharmaceuticals (**www.savira.at**), will focus on the development of drugs for the treatment of influenza.

Co-founded in September by EMBL and the Vienna-based biotech company onepharm Research and Development GmbH, Savira will build on the breakthrough results from Stephen Cusack´s lab where they identified the molecular architecture of the cap-binding domain in the PB2 in the PA subunit of the influenza viral polymerase.

These findings, in which Darren Hart's group at EMBL Grenoble and EMBL Heidelberg's Chemical Biology Core Facility were also involved, open new avenues for the structure-based development of anti-influenza drugs, targeting the viral polymerase to selectively stop the reproductive cycle. Savira's development pipeline of selective inhibitors will be fuelled from three different medicinal chemistry programmes and will draw on the know-how and intellectual property of the founders. "We believe that Savira is the perfect vehicle to translate our basic research results into urgently needed drug candidates to combat both seasonal and pandemic influenza," says Martin Raditsch, Deputy Managing Director of EMBLEM, EMBL's technology transfer company.

Savira, which is based in Vienna, received €1m support from the Austria Wirtschaftsservice (AWS) and was awarded third place by the City of Vienna Future Award (Wiener Zukunftspreis 2009) in the category 'Newcomers and Start-ups'.

Photos: Christine Panagiotidis

Open doors at the MMPU

Researchers from the Medical Faculty of the University of Heidelberg got together with EMBL scientists on 27 November for the 5th Molecular Medicine Partnership Unit (MMPU) Research Day.

Predocs, postdocs and physicians from the five MMPU groups – which are headed by one group leader from EMBL together with one from the Medical Faculty – presented their recent findings on understanding RNA quality control by NMD, paediatric brain tumours, lung diseases, colon tumours and regulators in cholesterol uptake.

The partnership, which was set up in 2002 by EMBL's Matthias Hentze and Andreas Kulozik from the Angelika-Lautenschläger Hospital for Children and Adolescents at Heidelberg University, aims to strengthen the link between molecular research and medicine by combining studies of the basis of common human diseases with applications in diagnosis and therapy.

"The MMPU Research Day, held twice a year, is becoming a conference not only for MMPU members but also for the medical and scientific community in Heidelberg," says Britta Schläger, who supports the management of the MMPU. "It's a platform for a broad scientific audience to learn about the latest translational projects of the groups and to get in contact with EMBL scientists, as well as with Medical Faculty clinicians."

The MMPU Research Day: What did you think?

"It's an opportunity to hear from the other groups and see how we might collaborate in the future. It's also nice to be in the new ATC!" – *Marcus Mall, MMPU group leader. Recently became the first ever recipient of a Heisenberg Professorship at Heidelberg's Medical Faculty*

"The open day has provided an opportunity for students in the MMPU groups to present their data in a relaxed atmosphere, despite the very tight schedule!" – *Heiko Runz, MMPU group leader, Heidelberg University*

"I'm used to always talking to clinicians, so an audience of basic researchers is a real change. The MMPU bridges the gap between the two very effectively." – *Guest speaker Stefan Pfister, DKFZ*

"It's a great way for me to get some insights into the work of the MMPU, as I'm planning to join Heiko's group downtown as a postdoc." – *Carolina Tangemo, EMBL PhD student, Pepperkok team*

ELLS in Genoa

In October European Learning Laboratory for the Life Sciences (ELLS) officers Rossana De Lorenzi and new recruit Tommaso Nastasi from EMBL Monterondo took part in one of Italy's biggest scientific outreach events, Genoa's Festival della Scienza.

In the hallowed surroundings of the church of Sant'Agostino, Rossana (below left) and Tommaso used a newly-developed activity, 'Naturally unbiased', to introduce some of the 200,000 festival-goers to the world of microbes. Participants were helped to observe microbes in their own saliva and from yoghurt, after which they learnt about how sequencing is producing an ever-growing bulk of data and allowing scientists to discover new microorganisms and functions.

Building bridges: the Postdoc Retreat

'*Retreat (n): 1. the forced or strategic withdrawal of an armed force before an enemy; 2. an asylum for the insane; 3. period of retirement for religious exercises, mediation or study*'. For the 84 EMBL postdocs who made the journey to Lago Maggiore on 4-6 November, their annual getaway was a combination of at least two of these three.

Held at the Hotel de Palma in Stresa, Italy – the midpoint between Heidelberg, Monterotondo and Grenoble – this year's retreat enjoyed a rise in attendance, especially from the outstations. As well as being a chance for postdocs to get away from it, hear all about each others' work and network with their peers, the event boasted distinguished and inspiring speakers in the shape of Lewis Wolpert, Miroslav Radman and EMBL alumnus Carlo Petosa. While Lewis sparked a very philosophical discussion with his talk on causal beliefs, Miroslav challenged the audience with his creative, high-risk research, and Carlo calmed frayed postdoc nerves with a comforting story of how a *Nature* paper *really* gets written.

The location certainly lent itself to relaxation and reflection. When they weren't busy in the scientific sessions, the postdocs enjoyed several dips in the hotel's panoramic jacuzzi, as well as a boat trip to neighbouring islands. "It presented all the eerie charm of a deserted tourist trap off-season, and was even devoid of locals," comments Remco Loos. "It's not every day your conference poster gets reflected in a set of gold-framed baroque mirrors," adds Aidan Budd.

"The overwhelming success of this year's retreat is thanks to everyone lending a hand to make sure everything went smoothly," says Sebastian Glatt, who led the organising committee. "I'd also like to thank EICAT for covering the rise in attendance so that we didn't have to be limited to 60 people."

Top: invited speakers Miroslav Radman, Louis Wolpert and Carlo Petosa; above, the Postdoc Association Committee; beautiful Lago Maggiore. Below: the 84 attendees

Photos: Jan Medenbach

newsinbrief

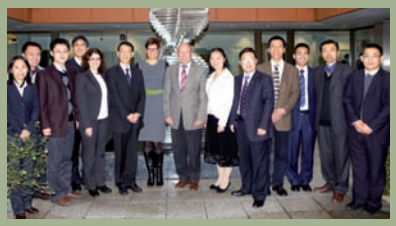
- Registration is open for the following **EBI hands-on bioinformatics training courses** to help you get to grips with your data: 'Programmatic access to biological databases (Perl)' on 22-26 February (registration closes 21 January); 'Plant bioinformatics' on 29-31 March (closes 26 February); and the EMBO Practical Course, '*In silico* systems biology: network reconstruction, analysis and network-based modelling', on 10-13 April (closes 26 February). For details see www.ebi.ac.uk/training/handson.

- EMBO would like to invite scientists to help shape the programme of **The EMBO Meeting 2011** in Vienna (10-13 September) by contributing to the workshop sessions. Proposals are invited from scientists who have ideas on new perspectives on any life science topic of interest to broad audiences. Single workshops, but also a series of related workshops held over consecutive days may be proposed. search. For more details see http://2011.the-embo-meeting.org.

- **15 international journalists** visited EMBL as part of a conference, 'Biotechnology and its impact on society', organised by the International Journalist Programme Initiative. After an introduction by Head of International Relations and Communications Silke Schumacher, group leader Francesca Peri presented her research, and then the visitors toured lab facilities and were impressed by the architecture of the ATC.

- The new ATC teaching lab was used for the first time when EMBL's European Learning Laboratory for the Life Sciences (ELLS) invited 40 students from Heidelberg-area schools to an **iNEXT event on 5-6 November.** The Interactive Network for Experimental Training (iNEXT) aims to develop more 'inquiry-based' materials and methods for science teaching. "It's important to ensure that students take an analytical approach and learn to ask questions and formulate hypotheses when they're studying science," explains Julia Willingale-Theune, Head of ELLS. "It's not a subject that should be taught dryly, straight from a textbook." iNEXT is funded by the Robert-Bosch-Stiftung.

- A delegation of **visitors from Jiangsu province in China** visited EMBL Heidelberg on 6 November as part of a tour of the institutes and biotech spots in the city. The visitors, who



came from governmental departments, universities and industry, learnt about the way EMBL works from Head of International Relations and Communications Silke Schumacher.

- EMBL Grenoble has recently been host to **Prof. Iqbal Chaudhury**, head of the foremost academic research institution in Pakistan, the ICCBS at the University of Karachi. A guest of the French government, Prof Chaudhury is on a mission through France to set up collaborations and interactions. Group leaders Imre Berger and Christiane Schaffitzel are hosting two graduates from his institute, Nadja Ashraf and Humeera Waheed, who received Fellowships of Excellence by the French Embassy in Pakistan to work at EMBL.

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

Course	Date / site
Minute taking with Confidence	8 Jan (EBI)
Excel Beginners	28 & 29 Jan (HD)
121 Advanced Presentation Skills	28 & 29 Jan (EBI)
Interviewing Skills	1 Feb (EBI)
Presentation Skills	2 & 3 Feb (EBI)

In addition, the new term of **in-house language courses** will start in late January. See http://intranet.embl.de/personnel/training_development/index.html for details.

Give something back to the EIPP!

How would you like to do your bit for the EMBL International PhD Programme (EIPP) – and get your next trip back home for free?

Dean of Graduate Studies Helke Hillebrand would like to encourage students to take part in the new EMBL PhD Ambassadors programme, which reimburses up to €300 travel and materials expenses to those who give a talk about the EIPP at an EMBL member state university.

Ludovic Brun, a third-year predoc in the Nédélec group, was the first such student to take part when he went on 26 October to the Université Paris 7/11, where he did his masters degree in physics. He gave a ten-minute presentation about EMBL, the PhD programme and Heidelberg. "It was an audience of physics students, so moving into molecular biology was something that many of them hadn't thought about, or thought possible," he says.

Next up are France Audrey Peltier and Aino Inkeri Järvelin, who'll be giving similar talks at their former universities in Paris and Tampere, where they studied genetics and biotechnology respectively. Helke would like to encourage more volunteers to come forward. "It's a great way of giving something back to our member states and enhancing the visibility of predoc opportunities at EMBL," she says.

If you'd like to become a PhD Ambassador, please contact helke.hillebrand@embl.de.

fromtheStaffAssociation

- **Saturday, 30 January: Burns Night.** The longest-running annual event at EMBL Heidelberg! The Scottish party of the year with whisky, bagpipes, haggis and dancing. Tickets will be on sale in December.

- **Monday, 8 March: Bernd-Uwe Jahn's Official Farewell and ATC opening party for all staff.** Staff from all EMBL sites are invited to say goodbye to Bernd-Uwe Jahn, our retiring Administrative Director, and join in to celebrate the opening of the ATC. The evening event will include dinner and live music, as well as tours of the conference facilities.

- Keep up-to-date with events at **www.embl-heidelberg.de/~staff** (site for EMBL pensioners: **www.embl-heidelberg.de/~staff/pensioners**).

– Catherine Floyd

events@EMBL

14-15 January EMBL Heidelberg
Meeting of the Nordic EMBL Partnership for Molecular Medicine
All faculty welcome

19-22 January EMBL Heidelberg
Course: Exploring Modular Protein Architecture

25-29 January EMBL-EBI
Course: Small Molecule Bioactivity Resources at the EBI

27 January EMBL Heidelberg
Course: Preparing for the Academic Job Market

30 January EMBL Heidelberg
Burns Night

7-11 February EMBL Heidelberg
EMBO Practical Course: Genomic approaches to evolution and development

10-11 February EMBL Monterotondo
Heads of Units/Senior Scientists Mtg

22-26 February EMBL-EBI
Course: Programmatic Access To Biological Databases (Perl)

1-3 March EMBL-EBI
Conference: Therapeutic Applications of Computational Biology and Chemistry: TACBAC 2010

3-5 March EMBL Heidelberg
EMBO Workshop: Visualizing Biological Data (VizBi)

8 March EMBL Heidelberg
Bernd-Uwe Jahn's Official Farewell and ATC staff opening party

8 March EMBL Heidelberg
Staff/alumni reunion

8-10 March EMBL-EBI
ELLS LearningLAB: Enhancing Biology Teaching Using Biological Databases

8-14 March EMBL Heidelberg
Course: Advanced Microscopy

9 March EMBL Heidelberg
ATC Official Opening Ceremony

For more details about these events and more, visit www.embl.org/events

people@EMBL

Martin Beck will join EMBL Heidelberg's Structural and Computational Biology Unit as group leader in January. Originally from Leipzig, Martin studied biochemistry at the Martin Luther University in Halle-Wittenberg, Germany, before going on to study for his PhD in life sciences from the Max Planck Institute for Biochemistry in Martinsried. Since 2006 he has been a postdoc at ETH in Zurich, and his group at EMBL will study macromolecular assemblies using electron microscopy and mass spectrometry.

Carsten Sachse will also join the Structural and Computational Biology Unit as group leader in electron microscopy at the beginning of next year. Currently a postdoc at the MRC's Laboratory of Molecular Biology in Cambridge, UK, Carsten gained his PhD in molecular biology from the Friedrich-Schiller-Universität in Jena, Germany and Brandeis University in Waltham, USA. At EMBL, his group will study the degradative pathway of pathological aggregates through autophagy using single-particle cryo-EM.

As the next EMBO Director from 1 January 2010, Professor **Maria Leptin** will establish a research group in the Directors' Research Unit at EMBL Heidelberg. Her focus will be on complex cell shapes and the genetic pathways that determine them. Maria will be only the fifth director in EMBO's forty-five year history, and will take over from Hermann Bujard who has been Director since 2007. "I am thrilled to continue the initiatives begun by previous directors that promote the molecular life sciences in Europe and worldwide," says Maria.

Melanie Rauscher will take over as EMBL Heidelberg's Genome Biology Unit secretary from Sylvia Schattschneider when she moves over to Cell Biology and Biophysics Unit in the new year. Originally from Frankenthal, Melanie worked at the Medical Research Center in Mannheim and then as a medical and administrative assistant for the US Army Hospital in Rohrbach before coming to EMBL. "It's a very open and international environment here, just as I imagined it would be!" she says, having already spent three months shadowing Sylvia.

Burn bright, my light

Children from EMBL Heidelberg's Kinderhaus, their parents and teachers lit up the campus with a traditional St. Martin's Day lantern parade on 10 November. Carrying their own home-made lanterns, the children were commemorating in the traditional German way the compassion St. Martin showed towards a poor man by dividing up his coat into two pieces.

Photo: Christine Panagiotidis

EMBL&cetera issue 54, December 2009. Published by EMBL's Office of Information and Public Affairs, Meyerhofstrasse 1, D-69117 Heidelberg. e-mail: info@embl.de. Available online: www.embl.org/newsletter. Editor: Vienna Leigh. Editorial support: Lena Raditsch, Silke Schumacher. Contributors: Louisa Wright, Mehrnoosh Rayner, Katrina Pavelin, Sonia Furtado. Photographic support: EMBL Photolab. Graphic support: Petra Riedinger. Front cover photo: Christine Panagiotidis. Printed by ColorDruck, Leimen.