

# EMBL etcetera

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## Tara returns

At the end of March, the research vessel Tara sailed into the port of Lorient in France, two-and-a-half years after setting sail around the world to study the tiny organisms that make up roughly 98% of the ocean's biomass, yet about which scientists know so little. Travelling some 60 000 nautical miles, the Tara Oceans expedition, co-led by EMBL's Eric Karsenti, has collected tens of thousands of samples from more than 150 field stations. And it has provided a fantastic adventure for the crew involved. [See page 3](#)

## Here today, gone tomorrow

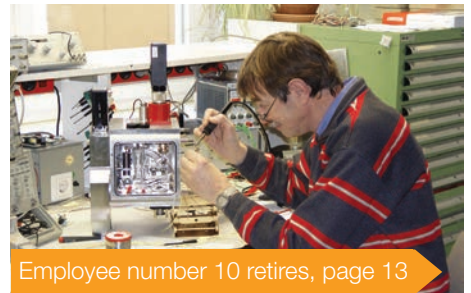
It's all change across EMBL sites, with established faces taking on new and exciting challenges within and without EMBL



Monterotondo to Melbourne, page 5



EMBL-EBI Associate Directors, page 4



Employee number 10 retires, page 13

## Instruct formally launched

New distributed infrastructure combines resources in structural biology

Instruct, which is a collaboration of 15 of Europe's leading structural biology institutes, was launched at an official signing ceremony in Brussels on 23 February. Emerging from the trend in structural biology towards combining multiple techniques to tackle challenging problems, Instruct will link up users across Europe with state-of-the-art technology, expertise, and training through a single point of entry. EMBL's Structural Biology units in Grenoble, Hamburg, and Heidelberg comprise one of the core partners. [Find out more on page 2](#)



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## Shared ambition

Stephen Cusack, Head of EMBL Grenoble, discusses the challenges and opportunities ahead for Instruct – the new distributed research infrastructure launched in February that will provide structural biologists across Europe access to state-of-the-art facilities.

### Stephen, what are the key aims of Instruct?

The goal is to promote multi-resolution structural biology by increasing access to the best technologies around Europe, through a single application portal. Fifteen centres in eight countries have agreed to open a range of facilities, often unique and expensive, including synchrotron X-ray beamlines, high-field and solid-state NMR, advanced electron microscopy, specialised protein production, and native mass-spectroscopy. If Instruct can achieve adequate levels of support and funding, then it will enable researchers to benefit in a similar way to scientists working within the Partnership for Structural Biology (PSB) in Grenoble, but at a Europe-wide level. The PSB has been a model in providing multiple structural biology technologies in an integrated way.

### What has it taken to get to this stage?

Instruct was one of the first ESFRI (European Strategy Forum on Research Infrastructures) projects, and has built on long-standing collaborations between European structural



Stephen (centre) signs the accession agreement with the European Director-General for Research and Innovation, Robert-Jan Smits (left) and Instruct Director David Stuart (right) from Oxford University

© Miguel Amortegui

biologists. Between 2009 and 2011 the project received funding from the European Union for its preparatory phase. Facing a challenging financial climate, scientists from the centres, legal advisors, and administrators, worked intensively to deliver a viable scientific, organisational, and financial plan, resulting in the signing of the International Consortium agreement. In parallel, individual nations have been discussing how to finance investment in the centres. France, for example, has used the Instruct concept to guide the 15 million Euro FRISBI (French Integrated Structure Biology) project, which benefits mainly the Instruct centres in Strasbourg and Grenoble. The same is true, for instance, in the Czech Republic and the Netherlands.

### What are the next steps?

Instruct is still in its early stages, and is yet to achieve a sustainable level of funding: more countries need to join and each member needs to invest more in the central organisation as well as their national centres. Importantly, we need to be able to fund a pan-European access programme and other co-ordinating activities and are looking forward to opportunities under Horizon 2020 (see page 10). Meanwhile, Instruct needs to make the best use of its limited resources to prove to the structural biology community and other stakeholders that it merits continued and stronger support.

For further information, or to apply for access, visit: [www.structuralbiology.eu](http://www.structuralbiology.eu).

## Russian relations

Following a joint call with the Russian Foundation for Basic Research (RFBR), six collaborative projects involving EMBL and Russian scientists have been approved for two-years' funding. The projects involve research across various disciplines at EMBL's Grenoble, Hamburg, and Heidelberg laboratories, in the Furlong, Lamzin, Pillai, Schultz, and Wilmanns groups.

Further reinforcing EMBL-Russia ties, on 22 March EMBL signed a cooperation agreement with Lomonosov Moscow State University, the largest and oldest university in Russia. This concord aims to encourage and deepen cooperation, including mutual exchange of researchers, bilateral joint symposia, and promotion of research collaboration in fields of mutual interest through joint research projects.

The successful joint call and cooperation agreement are in line with a Memorandum of Understanding (MoU) signed by the RFBR in December 2010, expressing significant interest in Russia becoming an EMBL member state.

EMBL continues to strengthen links with Russia, forming strategic collaborations in research and training that offer exciting prospects for EMBL science and scientists



In February, EMBL-EBI welcomed a visiting delegation of scientists from the Skolkovo Foundation, advancing an MoU signed between EMBL and the Foundation last year.

The core of the Foundation's work is to build a new university town for research, development and commercialisation of innovative technologies, located at Skolkovo, near Moscow.

The Skolkovo delegation's visit was hosted by One Nucleus, the Cambridge-based membership organisation for international life science and healthcare companies. The visitors had the opportunity to find out more about EMBL-EBI's services, its industry programme and the ELIXIR project, as part of a busy schedule of visits to centres of research excellence across Oxford and Cambridge.

# A month onboard Tara

Deep in the East Pacific, as waves splash against Tara Ocean's distinctive orange nose, samples holding seawater in the research vessel's wetlab rattle on the shelves that fill much of the portaloosized cabin. EMBL Monterotondo predoc Bianca Silva takes a fixative and pours it carefully into a sample where tiny inhabitants, ranging in size from a couple of centimetres to less than one hundredth the width of a human hair, are swimming about: organisms that scientists believe are vital in understanding how ecosystems in the world's oceans function.

*"Some of the days were tough, taking samples from sunrise to midnight and beyond, but there was also time for fun"*

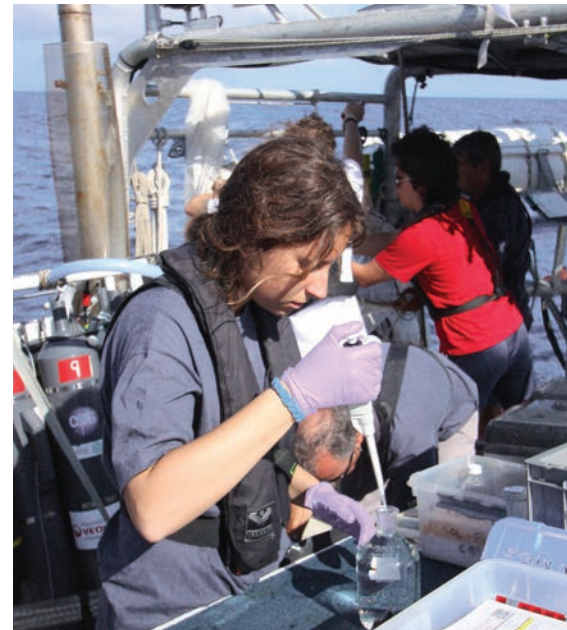
*– Bianca Silva*

"Learning more about plankton is very important because organisms in the water produce half of the oxygen we breathe, yet we know so little about them," Bianca says, following a month onboard as a member of the scientific team. "Samples were taken from the surface, down to 1000 metres

below, where very little light penetrates. We preserved them, they were then collected in port, and flown to laboratories around the world for analysis."

Scientists working on the expedition profiled variables such as acidity, temperature, and currents, in order to understand the impact that these might have on ecosystems. "From this you can gather a lot of information," Bianca says. "For instance, the chlorophyll maximum can reveal a lot about the biology of a particular area because all plants and algae use chlorophyll in the photosynthesis process. But these peaks depend on a lot of factors, such as how deep sunlight penetrates the water and how well mixed the water is. Their location is poorly understood, but following the expedition, data is already being used to map such organisms in the ocean."

For the 200-strong team that has been involved in the expedition, the experience will live long in the memory. "When onboard you have the feeling of being part of something very important. It is not just taking plankton out of the water –



samples are being sent to some of the most advanced laboratories in the world, and will contribute significantly to our understanding of the ocean's ecology, currents, molecular biology, and more."

Late one evening, there were shouts of excitement as scientists gathered around the microscope. "There was a fish in a sample that was completely transparent," Bianca recalls. "With the right contrast you could see the brain and spinal chord perfectly. Some of the plankton you see in the samples were really beautiful and the fact that we know so little about these organisms makes it really exciting as it keeps the door open for a lot of discoveries."

Above: Bianca working on one of the tens of thousands of samples taken during the voyage. Left: Taking time to relax onboard, at each port of call some of the 15 crew members – comprising scientists, sailors and journalists – were replaced



## De retour au port – Tara comes home

On 31 March, Tara appeared over the horizon in Lorient, France, completing her 60 000 mile journey across the world's major oceans to a huge welcome from cheering crowds, international media, and past and present crew members, kicking off a weekend of celebrations in the city.

Over the past two and a half years, the project, led by EMBL's Eric Karsenti and the president of the Tara Expeditions foundation Etienne Bourgeois, has taken samples from 153 stations at sea and stopped in over 50 ports in a bid to understand better how marine life will react to impacts such as climate change and pollution. Scientists from more than 50 laboratories around the world are carrying out research on the samples, including EMBL's Detlev Arendt, Peer Bork, and Rainer

Pepperkok, who are focussing on aspects such as evolution, genomics, and imaging.

Upon her return to port, those attending the celebrations listened to talks, watched films about the expedition, and spoke with crewmembers that navigated across some of the world's most diverse environments – from tropical coral reefs, to the circular currents of the Mozambique Channel.



© Tara Expeditions



⇒ Hear Bianca and others recount EMBL's role in Tara's journey – how and why the expedition took place, what life was like at sea, and how scientists managed the global operation – in the latest EMBL Explore podcast: [www.embl.org/explore](http://www.embl.org/explore).

## It takes two

Two new Associate Directors take on leadership of EMBL-EBI Services in April. Ewan Birney and Rolf Apweiler share their perspectives on the challenges in bioinformatics today

### How did you get into bioinformatics?

**Ewan:** It was very much by chance, actually. In my gap year between school and university I went to Cold Spring Harbor in America. I worked in a wet lab but there was some computational work and nobody else wanted to do it; I taught myself how to do it and really enjoyed it. That was my first taster: I totally fell in love with it then and now all I do is bioinformatics.

**Rolf:** When I was an undergraduate biology student in Heidelberg, I saw a notice saying that the EMBL Data Library was looking for an experienced biologist with good command of English and excellent computer skills. I had never seen a computer, English was my worst language in school, and I had only completed two years of biology. So I applied. Graham Cameron interviewed me. I didn't understand a word he said, but I must have nodded at all the right places because I got the job!

### Has EMBL-EBI played a part in changing science?

**Ewan:** EMBL-EBI has impacted all aspects of molecular biology. When someone searches DNA or protein databases, they are searching the EBI, either explicitly through our services or on datasets that we have helped capture, store, and transmit.



EMBL-EBI Associate Directors, new and old: Rolf Apweiler, Graham Cameron and Ewan Birney. For more pictures from Graham Cameron's retirement party, see page 12

**Rolf:** I hope that a lot of experiments have been successfully designed thanks to the data and tools we provide. The EBI is about more than the big genome studies. The underpinning role we have across the board in the life sciences is the real success story of the EBI.

### What's next for EMBL-EBI?

**Rolf:** Generally speaking, we will work on growing our resources and bringing them together. We need to keep looking for ways to combine and present the information we hold so that it is truly discoverable for people working in many different areas of science. We need to continue working closely with users so that we can provide the information they need to build tailored solutions for their specific communities.

**Ewan:** We are clearly one of the leading bioinformatics institutes in the world, and

I'd like us to become *the* leading bioinformatics institute in the world within the next 5 to 10 years. We should be part of the furniture that every molecular biologist relies on. We need to be part of the routine work of biology, but also part of transformational research and development in human health, plant breeding, biodiversity, and many other areas. The EBI has a tremendous track record of working with communities and collaborating extensively with other leading scientific groups. This is absolutely the right way to do things, and we are looking forward to carrying on this tradition well into the future.

⇒ See EMBL-EBI through the eyes of its Associate Directors, old and new, in a video interview with Graham Cameron, Ewan, and Rolf, on the EMBL YouTube Channel, [www.youtube.com/emblmedia](http://www.youtube.com/emblmedia).

## G'day mates! Australian visitors to Heidelberg

Patricia Kelly, Deputy Secretary of Australia's Department of Innovation, Industry, Science, Research, and Tertiary Education (DIISRTE), was welcomed to EMBL Heidelberg on 26 March. As well as strengthening cooperation in research, her visit aimed to evaluate experiences of, and future prospects for, associate membership – Australia being EMBL's first Associate Member State.

Upon being granted Associate Member status in 2008, EMBL Australia was formed to provide a direct link for Australian researchers to connect with research in Europe. EMBL Australia, with Nadia Rosenthal as Scientific Head (see page 5), is an unincorporated joint venture, whose

mission is to oversee the implementation of the Australian Associate Membership to EMBL. Its founding members are Monash University, the universities of Sydney, Queensland, and Western Australia, and CSIRO. In early 2011, the Australian National University, and the universities of Adelaide, Melbourne, and New South Wales acceded to EMBL Australia.

One of EMBL Australia's newest research partners is the Australian Nuclear Science and Technology Organisation (ANSTO). Earlier in March, Richard Banati, ANSTO's Distinguished Researcher Fellow, also visited Heidelberg with a view to advancing joint initiatives, including scientific collaborations.



Patricia Kelly, Deputy Secretary, DIISRTE

A key focus of his visit was to explore new opportunities in areas where nuclear instrumentation and techniques – beyond established structural biology approaches – can be brought to bear.

# “We pulled it off, and passed with flying colours”

Nadia Rosenthal leaves EMBL Monterotondo to take up new position as head of EMBL Australia

Innovator, politician, mentor, role model, scientist: skills that Nadia Rosenthal holds in abundance, and that have been essential in driving forward her compelling vision of a European centre of excellence in mouse biology at Monterotondo. “When I was invited to run the programme in Italy by Fotis Kafatos, the focus was on potential, rather than productivity just yet,” she recalls. “We had an early external review to determine our status as an outstation – I had a formidable line up of scientists who were coming from around the world to peer into our cupboards. I felt very responsible and nervous, and we prepared, and prepared, and prepared. We pulled it off, and passed with flying colours.”

## World-class

Fast-forward to 2012, and EMBL Monterotondo has evolved into a global centre of mouse biology research, with more than 70 staff, six research groups, and world-class facilities. The outstation has led, or had a leading role, in every large-scale mouse-based European Union consortia funded in the past ten years.

Nadia fondly recalls the challenges and opportunities of a “very colourful decade”. She worked closely with neighbouring CNR’s Head, Glauco Tocchini-Valentini, and his colleague Emilio Mattocchia, to build the necessary infrastructure for the outstation. “For example, obstacles to construction of the mouse house were significant: the site is on both a flood plain and earthquake zone, making a new building very difficult. We came up with the idea of a pre-fabricated building, incorporating innovative technologies from hospital construction. The facility is still state-of-the-art and in full operation today.”

Such foresight has created a place to which members of the mouse biology community gravitate. “One of the wonderful things about EMBL is that it is run by people who are flexible and who take onboard our ideas. This has allowed us to be nimble, responsive to the local environment, and resourceful in how we developed our activities in the context of the European scientific environment,” Nadia explains. “Young groups are able to exploit the richness of scientific endeavour around EMBL sites, and new and exciting collaborations are always being set up internally and externally.”

## Australia

Nadia’s work has taken her from the US, to Europe, and now to Australasia, where she hopes to develop this culture ‘down under’

with the help of EMBL Director General Iain Mattaj. “The goal of EMBL Australia (see page 4) is to support a continuous turnover of brilliant young scientists and train them in the EMBL style: nurturing them, rather than waiting for them to attain some sort of stature before supporting them,” she explains. “When we have achieved a critical mass, exchanges between EMBL groups in Europe and Australia will be natural.”

## Inspiration

Equally important is continuing to inspire others. “Gender is a neutral issue at EMBL, but there is no question that being a woman in this position presents an opportunity for me to act as a role model,” Nadia explains. “Women flood the biological sciences, but at the time when they should be promoted to a tenured position, they often fall short – the trick is to mentor women through this difficult transition period, so they themselves can be role models for future generations.”

“When we have achieved critical mass, exchanges between EMBL groups in Europe and Australia will be natural”

– Nadia Rosenthal

It was a teacher, a woman, who inspired Nadia to break from family tradition (her father is an award-winning composer and her mother was a concert pianist) and follow a career in science. “For me it was a playground, and I couldn’t imagine why anyone wouldn’t want to keep playing in it,” she says. But artistic talents still permeate many aspects of her work. “My group meetings are usually punctuated by me jumping up and drawing things on a board,” she smiles. “I do not hand out projects, I prefer to tease out people’s ideas and let them design their own. Science is changing so quickly in this field, what we are doing is training people who can take new ideas and work with them.”

## Connections

While Nadia will be on the other side of the world, don’t think we have seen the last of her: she is maintaining strong links with Europe through EMBL Australia and in running a small lab focussed on cardiovascular research at Imperial College, London. And for incumbent, and close friend, Phil Avner, she has three simple pieces of advice: “Be flexible, think laterally, and remember to enjoy the wonderful environment in Rome and its surroundings.”



From top: Nadia performs for her father; in the frame with EMBL-EBI director Janet Thornton; at the new mouse house with then EMBL DG Fotis Kafatos; Nadia’s artworks often combine ‘business’ with pleasure; at the launch of EMBL Australia

## Unravelling an ancient evolutionary mechanism

Petra Schwalie will soon be ready for a double celebration, as she finishes her PhD and sees her research published in *Cell*

Petra works in Paul Flicek's Vertebrate Genomics team at EMBL-EBI. Their study in *Cell* shows how an ancient mechanism that controlled gene function more than 150 million years ago is still driving genome evolution today.

Mammalian tissues need the protein CTCF to function normally. CTCF has several key activities, such as regulating gene activity, and it works by binding to DNA. But despite the importance of CTCF, little is known about how the DNA sequences to which it binds have evolved.

Using samples from six species, the team identified thousands of CTCF binding sites – some of which have been conserved throughout evolution and some that are specific to a particular lineage or species. Many of the sites had evolved through a mechanism that involves stretches of DNA called 'retrotransposons' copying and pasting

themselves across the genome. The study also revealed fossil retrotransposons in the genome, suggesting that this process was under way hundreds of millions of years ago.

"I wish there were more places like this so that everyone could have such an opportunity"

– Petra Schwalie

Petra was responsible for the computational analysis of the data, identifying CTCF binding sites and helping to elucidate how these sites evolved. "Petra's work enables us to look back into the past and see how the genome has been evolving – the only way to do this is through computational analysis," says Paul. "She's unbelievably productive in her work – and she's also an outstanding volleyball player with the University of Cambridge!"



"I feel very lucky to be a predoc at EMBL," says Petra. "The environment here is very dynamic, international, and one feels at the forefront of novel research. I wish there were more places like this so that everyone could have such an opportunity."

## Moving in the right direction

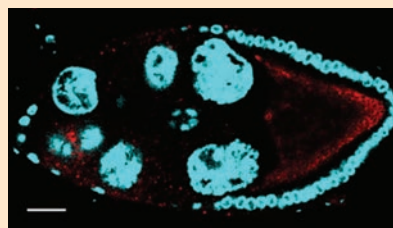
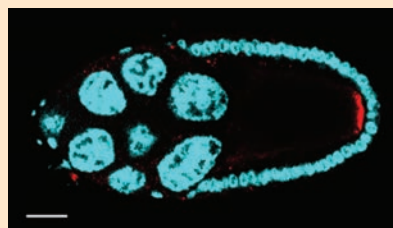
Scientists in the Ephrussi group at EMBL Heidelberg have found evidence of cellular tags that influence both the speed and destination of RNA inside a fruit fly egg cell.

For the embryo to develop as it should, *oskar* RNA produced by the mother has to enter the egg cell as it matures and be taken to one of its ends – the so-called posterior pole. When a cellular mechanism (known as splicing) processes *oskar* for transportation to this part of the cell, it does so by attaching two different tags next to each other on a specific part of the RNA. The study, published in *Nature Structural and Molecular Biology* in March, reveals that both tags must be in place in order to provide *oskar* with the molecular 'ticket' needed to reach its destination.

When the researchers genetically altered one of the tags, they found that *oskar* failed to reach its destination, but surprisingly it appeared to still move in the correct direction. Their findings suggest that, because the egg cell is growing, *oskar* needs to travel fast enough to outpace this expansion, and this indicates that somehow this 'ticket' must affect the

speed of travel as well as the direction in which *oskar* moves.

The research raises questions as to how the tags interact with each other to influence cellular machinery, and how varying cellular mechanisms might impact on where RNA travels to in the cell.



*oskar* RNA (red) is transported to the posterior pole in a normal fruit fly egg cell (top), but not in an oocyte with a mutated SOLE tag (bottom)

## Cellular efficiency

By measuring all the proteins produced by the bacterium responsible for atypical pneumonia, research led by scientists at EMBL Heidelberg has provided insight into how cells make use of limited resources to enhance their functionality.

The secret, they discovered, is fine-tuning. The team, comprising scientists in the Bork and Gavin groups, and collaborators including EMBL alumni, investigated the relationship between protein phosphorylation and lysine acetylation in *Mycoplasma pneumoniae* – a simple bacterium with relatively few proteins. The cell uses these 'post-translational' modifications to tweak proteins and alter chemical properties post-production, like a mechanic can fine-tune a new car.

Their findings, published in *Molecular Systems Biology*, show significant connections between the two modifications. The researchers believe this delivers additional cellular functions and enables cells to react faster to change. They also found that networks formed can be resilient to disruptions to individual proteins and hope that mapping them could eventually provide valuable information for drug design, as more complex cells such as our own also employ this 'tweaking' strategy. The study is a follow-up to 2009 research led by Anne-Claude Gavin, Peer Bork, and alumnus Luis Serrano.

## Enzyme evolution

Enzymes are crucial to life, and understanding how they have evolved to perform an incredibly diverse range of reactions is fundamental to our understanding of biological systems.

In a study of 276 enzyme super-families, researchers at EMBL-EBI and University College London demonstrated the extent to which enzyme functions have changed over the course of evolution. Published in *PLoS Computational Biology*, their findings have important implications for the development of new therapeutics.

“Our idea was to develop a knowledge base to explore the evolution of enzyme function by integrating sequence, structure, and chemistry information,” says the EBI’s Nick Furnham.

Using a new visualisation resource called FunTree, the team was able to pinpoint how an enzyme changes its function from catalysing one reaction to another over the course of evolution. This information may help in future studies that aim to predict the function of an enzyme, or to design new enzymes for industrial and medical purposes.

[www.ebi.ac.uk/thornton-srv/databases/FunTree](http://www.ebi.ac.uk/thornton-srv/databases/FunTree)

## Opening the door for enzyme research

EMBL-EBI’s new Enzyme Portal is a one-stop-shop for anyone interested in the biology of enzymes. Until now, the information was scattered throughout many different resources, so that you had to know exactly what you were looking for – often a real barrier to discovery.

The Enzyme Portal mines and displays data about proteins with enzymatic activity from 10 public repositories via a single search. It includes biochemical reactions, biological pathways, small molecule chemistry, disease information, 3D protein structures, and relevant scientific literature.

“The Enzyme Portal will serve researchers who are interested in the native metabolism of organisms as well as those working in drug discovery or chemical biology,” explains Christoph Steinbeck, Head of Cheminformatics and Metabolism at EMBL-EBI.

The design of the Enzyme Portal was based entirely on user demand and feedback. “We

## Decoding the great apes

The largest of the great apes has had its genome sequenced, with help from teams at EMBL-EBI, including those of Paul Flicek and Nick Goldman. The study, published in *Nature*, confirms our closest relative is the chimpanzee but shows that around 15% of the human genome more closely resembles that of the gorilla.

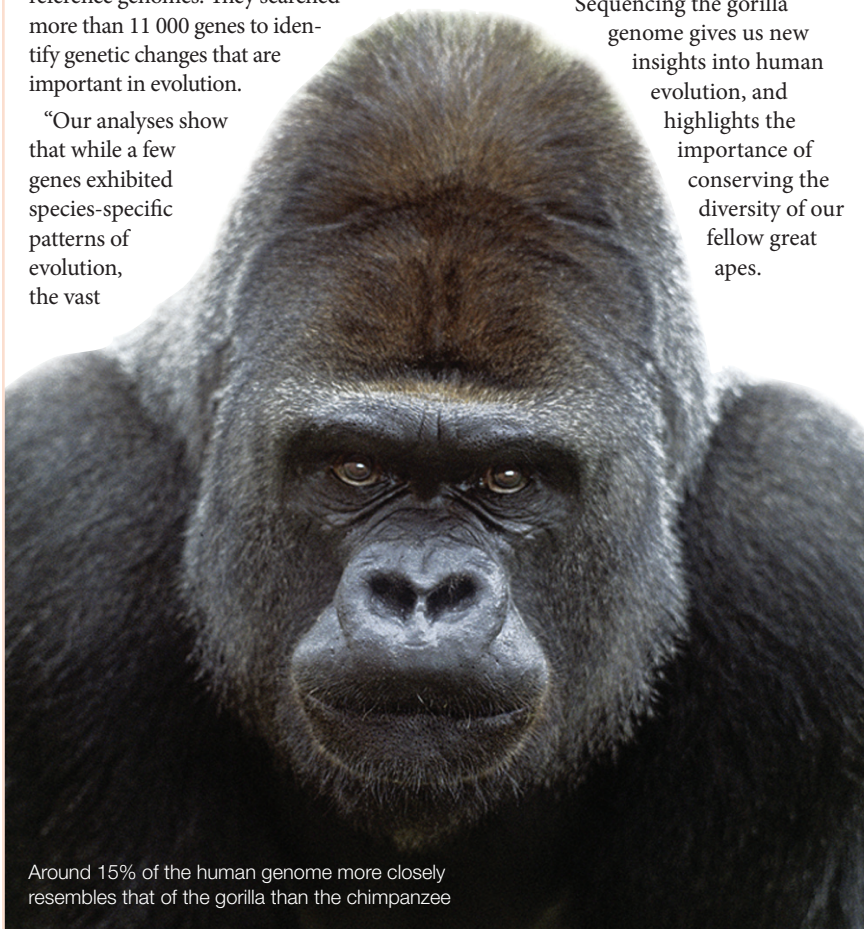
Using DNA from Kamilah, a female western lowland gorilla, the team assembled a gorilla sequence and compared it with human, chimpanzee, and orang-utan reference genomes. They searched more than 11 000 genes to identify genetic changes that are important in evolution.

“Our analyses show that while a few genes exhibited species-specific patterns of evolution, the vast

majority of genes evolved at similar rates over the past 6-8 million years,” said Gregory Jordan of Nick Goldman’s group.

The study demonstrated that humans and gorillas share many parallel genetic changes, notably in the evolution of our hearing. Scientists have long believed that the rapid evolution of human hearing genes was linked to the evolution of language. The new findings cast doubt on this, as hearing genes have evolved at a similar rate in gorillas and humans.

Sequencing the gorilla genome gives us new insights into human evolution, and highlights the importance of conserving the diversity of our fellow great apes.



Around 15% of the human genome more closely resembles that of the gorilla than the chimpanzee

didn’t come in with preconceived ideas of what it should be; it was designed by users, for users,” says Cheminformatics Coordinator Paula de Matos.

“The Enzyme Portal takes the researcher’s perspective,” adds User Experience Analyst Jenny Cham. “We leveraged user-testing feedback to create it, making it the first EMBL-EBI resource to have a fully user-centred design from scratch. This approach was not only cost-effective, it also made decision making and communication much easier – particularly in terms of design and technology choices.”

[www.ebi.ac.uk/enzymeportal](http://www.ebi.ac.uk/enzymeportal)



Opening doors: the team behind the new Enzyme Portal

## EMBL exports to Luxembourg

In the five years since Luxembourg became an EMBL member state, exchange of scientists and science has gathered pace

It's now six months since the new building for the Luxembourg Centre for Systems Biomedicine (LCSB) was officially opened at the University of Luxembourg – the only university in the country.

In May last year, EMBL Team Leader Reinhard Schneider took up the post of LCSB Head of Bioinformatics Core Facility, taking with him from EMBL his bioinformatician and two PhD students. "Building up a new group in a brand new institute is an interesting challenge," Reinhard reveals. "Given the size of Luxembourg, the effort and investments put into the life sciences – 140 million Euros over a period of five years – is enormous."

Reinhard and his group are responsible for efficient data flow between experimental, theoretical, and medical groups, and for developing new algorithms to understand and interpret data. "Exciting aspects of working in Luxembourg are the collaborative nature of research projects, the young and dynamic research climate, and the attractive research funding. One of the challenges, however, is space! Our new building is already too small, and we need to place the bioinformaticians somewhere else. Being in Luxembourg, the 'somewhere else' is the building of a big bank!"

EMBL-Luxembourg ties are strong thanks to an ongoing exchange of knowledge as well as people: Lars Steinmetz, EMBL Senior Scientist and Joint Head of the Genome Biology Unit, is collaborating with the LCSB to develop approaches in model systems. "The



LCSB is an exciting new venture with lots of drive and energy, where basic research will have a medical impact," adds Lars.

Other EMBL exports to Luxembourg include Evelyne Friederich, former EMBL Cell Biology and Biophysics postdoc, now head of the Life Sciences Research Unit (LSRU) at Luxembourg University. The LSRU has ongoing interaction with EMBL's Advanced Light Microscopy Core Facility, including training and recruitment.

EMBL Director General Iain Mattaj will visit Luxembourg on 5 June to discuss further collaboration and exchange.

### Mark your diaries

**24 May** DKFZ, Heidelberg  
**Bioinformatics Career Day**  
Organisers: EMBL-EBI, DKFZ  
Contact: [PhD-careers@dkfz.de](mailto:PhD-careers@dkfz.de)

**8 June** CNIC, Madrid  
**Local Chapter Meeting – Spain**  
EMBL Speaker: Iain Mattaj  
Host: Jose Luis de la Pompa  
Organisers: Maria dM Vivanco, Daniel Bachiller

**18 June** University College Dublin  
**Local Chapter Meeting – Ireland**  
EMBL Speaker: Iain Mattaj  
Host: Jez Simpson

**30 June–1 July** Dilofo, Ioannina  
**Local Chapter Meeting – Greece**  
EMBL Speaker: Christoph Müller  
Host: Anastasia Politou

**5 July** EMBL ATC, Heidelberg  
**EMBL Lab Day/John Kendrew Award ceremony**

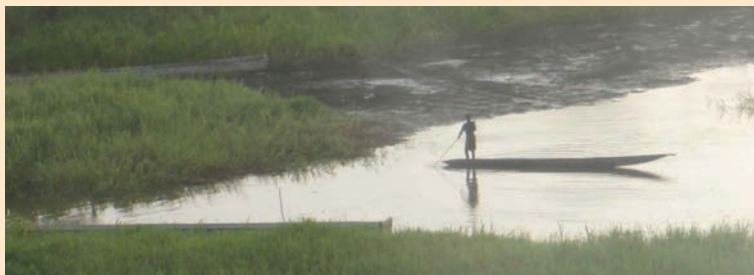
**6 July** EMBL ATC, Heidelberg  
**EAA Board Meeting**  
Send your items to [alumni@embl.org](mailto:alumni@embl.org)

**7 July** EMBL ATC, Heidelberg  
**Local Chapter Meeting – Germany**  
Organisers: Freddy Frischknecht and Mehrnoosh Rayner  
Followed by the EMBL Summer Party

For further details please visit the EMBL Alumni Association website [www.embl.org/alumni](http://www.embl.org/alumni) or contact [alumni@embl.org](mailto:alumni@embl.org).

### Send us your photos!

EMBL Alumni Office is looking for inspiring photos of life outside EMBL. Whether it's breathtaking photos of the landscape where you live, or amusing snapshots of where you work, we look forward to sharing your 'views'.



Freddy Frischknecht, former EMBL predoc, now Group Leader, University of Heidelberg Medical School, took these photos during a working trip to Papua New Guinea. Clockwise: departing for the regional health clinic on vaccination day; "No Smoking, No Chewing Betelnut" – seminar room at the PNG Institute of Medical Research, Goroka; Fishing in a malarial swamp



# Alumni survey summary

You asked for:	EMBL Alumni Association offers:
Job platforms	Please visit <a href="http://www.embl.org/alumni/jobs">www.embl.org/alumni/jobs</a> for jobs at the institutes of our alumni, EMBL and EMBO, and for links to other job platforms.
Online recruitment news	Please visit <a href="http://www.embl.org/jobs">www.embl.org/jobs</a> to register for EMBL job alerts according to your criteria.
Alumni platforms to advertise yourselves	Please use the alumni group on LinkedIn: <a href="http://tinyurl.com/EmblAlumniLinkedIn">http://tinyurl.com/EmblAlumniLinkedIn</a> .
Opportunities to stay in touch with former and current EMBL staff	<ul style="list-style-type: none"> <li>Find and write to EMBL alumni via the alumni members directory (if you've forgotten your login details, contact the alumni office): <a href="http://www.embl.org/alumni/membersdirectory">www.embl.org/alumni/membersdirectory</a>.</li> <li>Find and write to EMBL staff via the EMBL website: <a href="http://www.embl.org">www.embl.org</a>.</li> <li>Meet staff and alumni at one of the upcoming events, listed on the alumni homepage.</li> </ul>
Access to the pool of excellent candidates not selected by the EMBL PhD Programme	Please register with the Shared Applicant Pool: <a href="http://www.embl.org/applicantpool">www.embl.org/applicantpool</a> . If registered already, please use the original link sent to you, or contact the EMBL PhD office: <a href="mailto:predocs@embl.de">predocs@embl.de</a> .
Mentorship Programme	Staff and leavers are encouraged to use the alumni members directory (mentioned above) to identify and contact relevant mentors. The alumni office can advise you further in this area.
Information exchange between academia, industry and other employers	Most such events organised take place in Heidelberg (see 'Mark your diaries'), but we are reviewing how to encourage local chapters to offer similar programmes.
Career development courses and trainings	Since 2007, EMBL has increased the variety of courses offered to all its staff, to become better prepared alumni! The annual EMBL Career Day will be held 4 July 2012.
Access to EMBL Core Facilities	EMBL alumni have access to the Core Facilities and Services based on a fee and availability (EMBL staff and EMBO YIP members are given first priority). For more information, please contact Christian Boulin, Director of Core Facilities and Services.
More regional and virtual meetings also in non-EU locations	<ul style="list-style-type: none"> <li>View list of upcoming events on the Alumni Association homepage: <a href="http://www.embl.org/alumni">www.embl.org/alumni</a>.</li> <li>Virtual meetings are a good idea, and one that the Alumni Association is reviewing.</li> </ul>
EMBL publications	You can select which EMBL or EMBO publication you would like to receive via your alumni record: <a href="http://www.embl.org/alumni/record-update">www.embl.org/alumni/record-update</a> . Contact the alumni office if you have forgotten your login details.

## What's next? Careers come first for alumni

One message that was loud and clear from the alumni survey – completed by more than 800 alumni in December – was that alumni services, from the provision of news and events to online resources, are most highly valued when they help you with your careers.

You selected the alumni members directory, the PhD Shared Applicant Pool and the Heidelberg lunch card for life as the three most valued alumni services, and the Alumni Association will focus on these in particular for further improvement.

A small surprise was the discovery that 30 per cent of alumni are not sure about their EMBL Alumni Association membership status; a smaller percentage do not know the meaning of local chapters and would like to learn more about the Heidelberg lunch card – all explained below.

Thank you for your helpful comments, all of which will be addressed. Here's a selection of what is currently being progressed:

- For the website: a better search engine, more links to alumni institutes, more science-related images, history of the institution including all previous group leaders, a sortable alumni members directory, an alumni network for industry (in addition to academia), and a google map showing alumni whereabouts!
- For *EMBL&cetera*: more about alumni (including non-scientific staff) and alumni events.

## Your survey FAQs

- Local chapters** are alumni get-togethers organised regionally to bring together alumni and an EMBL staff speaker, and to explore how they can collaborate and support one another.
- EMBL alumni from all sites are entitled to **Heidelberg lunch cards for life**. Your old card is still valid for this purpose. If you've returned it already, you can request a new one for a €10 deposit from [general-services@embl.de](mailto:general-services@embl.de). Lunch card cash machines are located by the EMBL cafeteria and canteen.
- If you have never updated your EMBL record online, then you are not yet an official **member of the EMBL Alumni Association**. To join, or to find out your status, please contact [alumni@embl.org](mailto:alumni@embl.org).



## On the horizon

EMBL has released a position paper responding to Horizon 2020 – a legislative proposal on the future of European Union science funding – while also calling for increases to the overall budget and greater support for research infrastructure.

The seven-year, 86 billion Euro framework programme for research and innovation will run between 2014 and 2020, with a final decision regarding allocations of funding to be made jointly by the European Parliament and European Council at the end of this year.

EMBL is a major recipient of EU funding (it has so far received 154 million Euro from Horizon 2020's predecessors FP6 and FP7), and the lab's response commends the integrative approach taken in the proposal, stating that the programme would open up new research avenues for EMBL, and boost the development of the European Research Area (ERA).

However, the response also urges further support for basic research, research infrastructures, and initiatives such as Marie Curie Actions (research grants that provide crucial mobility to researchers in Europe), as well as an increase in the overall budget.

EMBL Director General Iain Mattaj and Director of International Relations Silke Schumacher have met with Robert Jan-



## Horizon 2020: Europe's new research plan

Based on three major objectives (strengthening Europe's position in science, boosting industrial leadership, and addressing major societal concerns), Horizon 2020 looks to stimulate job creation and growth in response to the global economic crisis.

Horizon 2020 is distinct from previous Framework Programmes in that it aims to provide a single set of rules – bringing together three separate programmes – as well as specific focus on linking up research and innovation, addressing societal challenges, and simplifying access to funding.

Specific policy measures are planned prior to the launch of Horizon 2020 in 2014, with the ambition to complete and further develop the ERA – a single European research space.

Smits, Director General for Research and Innovation in the European Commission, and Teresa Riera Madurell, a Member of the European Parliament who is rapporteur for Horizon 2020, as well as with other

key decision makers in Brussels in order to communicate EMBL's views, as a key stakeholder, ahead of the launch of the final programme, and further high-level meetings are planned in the near future.

## EMBO Molecular Medicine goes Open Access

EMBO Molecular Medicine converted to full Open Access in mid-March. The papers accepted from now on will be run under a creative commons attribution Non-Commercial Licence that allows anyone to copy, share and adapt the work with full attribution. All articles that have been published in the journal are also now freely available to researchers, clinicians, and the public.

Its sister title *Molecular Systems Biology* was one of the first high profile journals to be launched Open Access in 2005. Given the current constraints of open access economics, *The EMBO Journal* and *EMBOreports* will continue to provide an Open Access option to authors, while also relying on subscription income.

Bernd Pulverer, Head of Scientific Publications at EMBO, comments: "*EMBO Molecular Medicine* is one of the highest profile journals in the life sciences to have converted from a subscription-based model to an Open Access model. We have been able to implement an author charges policy that should allow any biomedical researcher to publish their research here."

A rigorous and transparent peer-review process guarantees the quality of the journal. EMBO editors Anneke Funk and Céline Carret, and chief editor Stefanie Dimmeler (Goethe University, Frankfurt), are supported by a panel of senior editors including EMBL Associate Director Matthias Hentze. [www.embomolmed.org](http://www.embomolmed.org).

## CEITEC 'Czechs' in

In March, the Central European Institute of Technology (CEITEC) in the Czech Republic signed a Memorandum of Understanding (MoU) with EMBL to promote scientific collaboration and with a view to future Czech Republic membership in EMBL.

CEITEC, officially launched in September last year, aims to establish a Central European centre of scientific excellence in Brno, in the area of life sciences and advanced materials and technologies. A consortium of partners is jointly implementing the project, led by Masaryk University.

The MoU supports strategic long-term scientific collaboration between CEITEC and EMBL scientists, including training, joint research projects, information exchange, cooperation in major infrastructure projects such as ELIXIR and EuroBioImaging, and exchange of data on research performance.

Collaborative activities in support of the MoU are already well under way: a joint workshop brought together key CEITEC researchers and EMBL scientists in October last year, and EMBL is producing benchmarks that will help CEITEC to evaluate the scientific performance of its groups.



## 'Dynamic DNA' in demand at science festival

In a fun-packed weekend at the annual Cambridge Science Festival in March, staff from EMBL-EBI and the Wellcome Trust Sanger Institute helped more than 1000 visitors to get hands-on with 'Dynamic DNA'.

Forty volunteers presented the science of DNA, genes, proteins, and cells through a range of activities: competitive dads raced against the clock to become champion of the 'Ready, Steady, Sort' game to mimic how computers sort information, while younger visitors flaunted their superior recall skills in the 'Cell Memory' matching game.

Visitors to this year's festival were also introduced to six unlikely suspects: Valerie Valine, Arnold Argenine, Lisa Lysine, Theo Threonine, Cybil Cysteine and Alfie Alanine in the 'Protein Line-up', as they combined maths with biology to analyse mass spectrometry data to work out which 'suspect' went where.

Over two days the enthusiastic visitors used more than 300 metres of elastic to make 500 sequence bracelets, got through 6000 gummy bears to model DNA, and folded 400 origami DNA helices.

⇒ This year's programme can be found at: [www.cam.ac.uk/sciencefestival](http://www.cam.ac.uk/sciencefestival).

## science&society

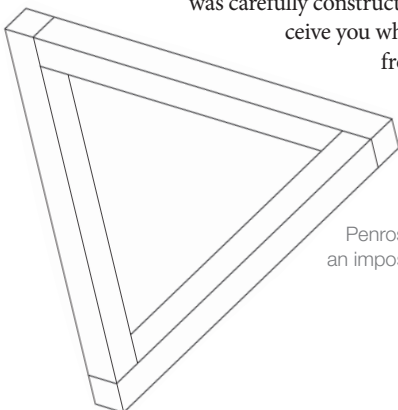
### The puzzle of the conscious mind

Is consciousness something that will never be fully explained or understood? Or is it a physiological phenomenon like any other, which can be fully explained provided we have the right tools? A captive Science and Society Forum audience considered these questions as psychologist Nicholas Humphrey gave a talk at EMBL Heidelberg in March. Here Nicholas shares his thoughts on the 'magic of consciousness'...

#### Can we explain consciousness from a scientific viewpoint?

I understand why many people say consciousness can't have a scientific explanation. The core experiences of seeing red, or feeling pain, for example, certainly seem to have features that couldn't possibly arise from physics and chemistry. But let's put the emphasis on the word 'seem'. Because for something to seem to have mysterious inexplicable features doesn't mean it really has them.

Suppose you were to come across an object that looked just like the triangle below. No doubt it would seem to you a scientific impossibility. But you wouldn't throw away your physics books. You'd realise, of course, it must be an illusion. And, sure enough, if you could only change your viewpoint you'd discover that what you were actually seeing was carefully constructed to deceive you when you look



Penrose Triangle: an impossible object?

from a fixed position.

As Sherlock Holmes said, "once you've eliminated the impossible, whatever remains, however improbable, must be the truth." I think the truth about consciousness – if only we can see it from the right perspective – will indeed turn out to be a highly improbable bit of biological engineering, a clever trick played on us by Nature. But I think someday we'll be able to give it a straightforward explanation.

#### Has modern neuroscience added much to the study of consciousness? Or is studying consciousness still basically a philosophical affair?

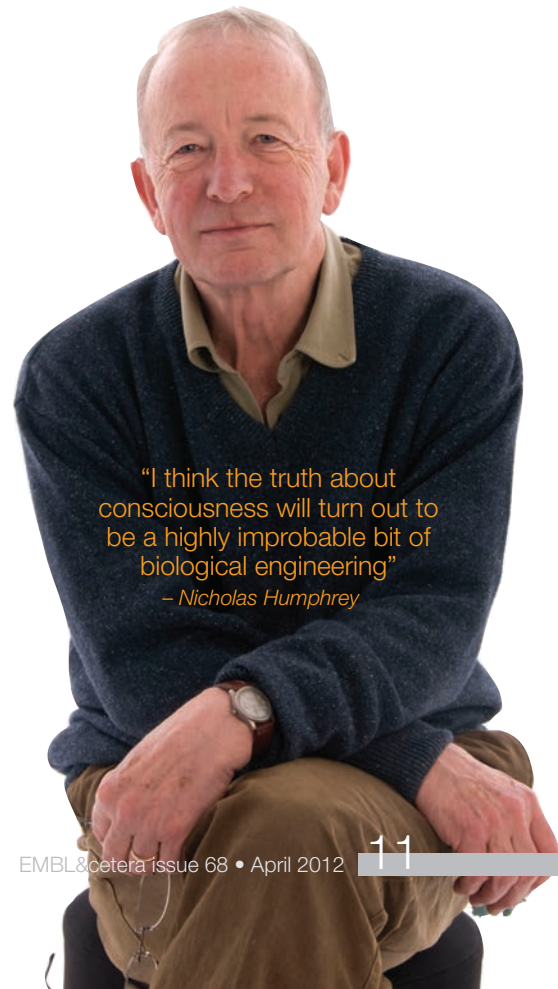
Neuroscience is telling us a lot about our brains, and it may soon tell us a lot about our cognitive processes – memory, attention, language, and so on. But I wouldn't say it has yet provided any worthwhile insights into the nature of consciousness. Unfortunately, neither has modern philosophy! For me, the real source of inspiration has been experimental psychology and evolutionary biology – plus lengthy private reflection on what my own consciousness is like. Introspection still has much more to tell us than brain imaging.

#### Could you summarise the difference you proposed in your lecture between sensation and perception, and how it helps to explain consciousness?

We process the information provided by our sense organs in two quite separate ways. One tells us about the stimulation at the surface of our bodies and how we personally feel about it – sensation: a representation of 'what's happening to me'. The other tells us about what the stimulation signifies about the world beyond – perception: a representation of 'what's happening out there'. Contrary to what most

people assume, perception does not depend on sensation. In fact, after brain damage, visual perception may still be possible even though visual sensation has been lost (as in the case of 'blindsight').

The importance of this distinction to understanding consciousness is that having sensations is what being conscious is all about. In fact, a person with blindsight, even though he can perceive the world, will say he's unconscious, there's simply nothing 'it's like' for him to see.



"I think the truth about consciousness will turn out to be a highly improbable bit of biological engineering"

– Nicholas Humphrey

## talkingpoint

EMBL Heidelberg group leader Maja Köhn delivered an EMBL Insight Lecture on chemical biology to nearly 600 pupils and their teachers from across Europe watching live in the auditorium or via a live stream on the web. The presentation, which coincided with the finale of the United Nations' International Year of Chemistry, explained how different disciplines such as organic chemistry, cell biology, structural biology, and biochemistry, are being combined to further understand illnesses such as cancer. "The most important thing is that students see the connection between chemistry and biology," Maja explains. "The phosphatase we study is related to cancer, so the goal was to explain how we, and people in industry, try to find inhibitors using chemical biology tools. A lot of students stayed on after the talk and asked insightful questions relating to our experiments. It really helps pupils to connect with and understand the work that we are doing."

➡ To view a video of the lecture, visit: [www.embl.org/ells/insightlectures](http://www.embl.org/ells/insightlectures).



## Goodbye Graham

Clockwise from below: Janet Thornton, EMBL-EBI Director, gives a moving farewell speech at Graham Cameron's retirement party; Graham with EMBL Director General, Iain Mattaj; Fotis Kafatos, former EMBL Director General; Graham Cameron with Gregg Hamm, Graham's first boss; Senior Scientific Database Curator Eleanor Stanley, with Michael Ashburner, former Joint-Head of EMBL-EBI



Photos courtesy of Amos Baird

## Humble beginnings

In 1974, at age 25, Bernd Robrahn joined a small team of renowned scientists at the Deutsches Elektronen-Synchrotron (DESY) as EMBL employee number 10

EMBL Hamburg, the first EMBL outstation, had just been launched as a crucial part of the vision of a Europe-wide centre of excellence for the life sciences. Here, teams of scientists were leading what would become a boom in synchrotron radiation experiments that today enable scientists to unravel some of the most complex molecular complexes in Nature. Now entering into retirement, Bernd has had a front row seat for nearly four decades.

“I look back over nearly 40 years here, and it makes me feel very proud to have been a part of it.”

– Bernd Robrahn

He felt, he recalls, “a small part of something very big. This was my feeling when I joined EMBL and it is still my feeling.” When he arrived in 1974, leaders at the fledgling laboratory immediately put Bernd’s expert electronic skills to the test. “If something mechanical or electronic was needed by the scientists, either we outsourced it, or it was up to me to build it in house. In those days it was not possible to use computer software – we often had to develop complex electronic solutions in order for scientists to make use of the synchrotrons.”

As new terminology such as ‘structural genomics’ and ‘high-throughput’ entered scientists’ vocabulary, Bernd’s expertise helped to push forward key methods such as small angle scattering and high-resolution x-ray spectroscopy. “We invented technologies that did not exist, and some of which are still used all around the world,”



he says, pointing to a wealth of examples – from an online image plate scanner that has revolutionised the speed and accuracy of protein crystallography, to a device that enables scientists to remotely control the levels of radiation in beamlines. “I have had involvement in all of this,” he smiles.

Indeed, take a walk around EMBL Hamburg today and it is hard to find something



that Bernd has not helped to develop, as scientists at the outstation now focus on major projects such as the state-of-the-art beamlines at the PETRA III ring. “It is incredible how things have progressed – there is more and more work to do here,” he says. “We have pushed technologies to the limit, but most of the time the scientists came to me, explained what they needed, and got what they wanted.”

Bernd now plans to spend more time with his family, and pursuing hobbies such as hiking, photography, and travel – but he embraces this with a heavy heart. “The thing I will miss most is the people here,” he says. “My wife says that I do not look or act like a person who is about to retire, and this energy comes from my colleagues. I look back over nearly 40 years at EMBL, and it makes me feel very proud to have been a part of it.”

Main picture: Bernd hard at work at EMBL Hamburg, where he has given 37 years and 5 months’ service. Inset: Bernd’s EMBL card



## Art and science

What better way to encapsulate a conference on visualising biological data than by taking artistic sketch-notes? Francis Rowland, web developer at EMBL-EBI, sketched his impressions of VIZBI 2012, the third international meeting on Visualizing Biological Data, held 6–8 March at EMBL Heidelberg. VIZBI, organised jointly by EMBL and EMBO, brings together scientists, illustrators, and designers actively using or developing computational visualisation to study a diverse range of biological data.

## Get ready for Lab Day 2012

Preparations for the annual showcase of research and other activities happening across EMBL sites is well under way ahead of the big day on 5 July.

Lab Day, which takes place at EMBL Heidelberg, presents opportunities for all people from the lab's five sites to come together to learn about ongoing projects, exchange ideas, and forge new collaborations. The morning programme includes a selection of short scientific seminars in parallel themed sessions, while part of the afternoon includes a plenary session of EMBL's latest research.

This year's Lab Day will be different from the previous years in that research abstracts are invited from every lab at EMBL. Some of these will be selected for short talks in the concurrent sessions, while the remaining will be presented as posters. In addition, the display of 'fun' posters will continue as in previous years and all groups and departments are encouraged to showcase their work.

The day also features other highlights, including the presentation of the prestigious

John Kendrew Award, and the graduation ceremony for EMBL's latest doctorates.

The programme for the day will be available shortly, but if you have any suggestions, the organising committee – Eileen Furlong (EMBL Heidelberg), Donal O'Carroll (EMBL Monterotondo), Ramesh

Pillai (EMBL Grenoble), and Alvis Brazma (EMBL-EBI) – would be very pleased to hear your ideas.

Like last year, Lab Day will follow the annual Career Day, which takes place 4 July, highlighting useful career opportunities and pathways across a variety of professions.

Thursday, 5 July 2012

# Lab Day

Drop everything!

NEW! Talks selected from abstracts  
Your posters!  
Graduation ceremony, music, party ...

EMBL Heidelberg

Don't forget to register!  
Deadlines:  
31 May abstract submission  
21 June registration & accommodation

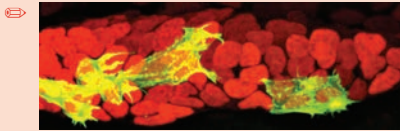


## Spring tails

As spring arrives, flowers seem to bloom everywhere – even under the microscopes at EMBL. But the 'flowers' in this picture actually help an animal, not a plant, to pass on its genes.

The image, which has been false-coloured for artistic effect, shows a slice through the tails of mouse sperm. Each 'flower' is the tail that a sperm cell wags to swim. Inside it, you can glimpse the secret behind sperm's typical swimming technique: two tubes called microtubules, surrounded by a ring of nine other microtubule pairs. With the help of specialist 'motor' proteins, these microtubules make the sperm tail beat, enabling the sperm to swim.

The image was taken using an electron microscope, and shows sperm tails from a healthy mouse, magnified 46 000 times. While comparing sperm formation in healthy and genetically altered mice, Charlotta Funaya, a research technician at EMBL, was struck by the image's beauty. "This particular image didn't really serve a scientific purpose," she says: "I took it because it looked pretty."



Which EMBL group provided the banner image on the front cover? Find out in EMBL's *Research at a Glance 2012*, now available in print, and online at: [www.embl.org/raag\\_latest](http://www.embl.org/raag_latest). The publication gives a snapshot of the current and future research being carried out by EMBL's groups and Core Facilities, as well as providing interesting background information on the laboratory and career opportunities across EMBL's five sites.

Renowned scientists from Osaka University visited EMBL Heidelberg in January for a mini-symposium on probe development and application. Talks covered protein cross-linking, fluorescent labelling, and metabolism, and enabled researchers to communicate and reflect on recent results.

"This event really helped to get collaborations going," says EMBL senior scientist, Carsten Schultz.

On 1 March, EMBL-EBI welcomed early-career scientists for an Open Day. Highlights included an interactive session to introduce the new Enzyme Portal (see page 7) and a talk about the new online training resource, Train online. The next Open Day will take place 20 November 2012. For more information visit: [www.ebi.ac.uk/training/penday](http://www.ebi.ac.uk/training/penday).

The Szilárd library is now offering 24/7 access to thousands of academic e-books to EMBL staff. Users can preview, read online, download, and access books on a hand-held device. The opportunity includes copying and printing options, and the library will cover all initial costs during the phasing-in stage. Users can access the service through the EMBL intranet. Share your thoughts on the new service with: [library@embl.de](mailto:library@embl.de).

The Thornton group's review, 'Computational Biology for Ageing', was one of the top 10 downloaded articles in the journal *Philosophical Transactions of the Royal Society B* in 2011. The paper describes the databases and tools available to researchers and discusses computational approaches to data interpretation. View the paper at: <http://bit.ly/HBKljz>.

Elizabeth Murchison of the Wellcome Trust Sanger Institute has been awarded the 2012 Eppendorf Award for Young European Investigators, to be presented at a ceremony at EMBL Heidelberg on 9 May. Elizabeth was recognised for her studies on the genetics and evolution of clonally transmissible cancers. [www.eppendorf.com/award](http://www.eppendorf.com/award)

Registration is now open for the Joint EMBL-EBI/Wellcome Trust Resources for Computational Drug Discovery course, 2–6 July 2012 (registration deadline: 7 May). To find out more visit: [www.ebi.ac.uk/training/hands-on](http://www.ebi.ac.uk/training/hands-on).

## EMBLinpictures



Alpine Club members from Heidelberg and Monterotondo ski-touring in the Swiss Alps

© Andrea Pizzo



Facebook picture of the week – 'Beautiful blossoms put a 'spring' in our step at EMBL Heidelberg' – gains 40 'likes'



Denis Noble gives a Heidelberg Forum Science and Society lecture – 'The music of life: principles of systems biology' – in February



Alumna Katherine Brown gives her opinion of the EMBL Dive Club trip to Thailand in March

© Toby Mattinson



EMBL Heidelberg's Theatre Club perform 'Love Hiccups (Reloaded)' after the Staff Association General Assembly and Clubs Fair

© Wolfgang Hübner



Seventy EMBL Grenoble and UVHCI staff take to the slopes in the French Alps in March for their annual ski day

7 May EMBL Heidelberg

**Distinguished Visitor Lecture:**

Ira Mellman, Genetech, San Francisco

7 May EMBL Monterotondo

**Science and Society Forum lecture:**

Animal-human chimeras – Monsters or Better Models for Research? Robin Lovell-Badge, MRC National Institute for Medical Research, UK

10 May EMBL-EBI

**Science and Society Symposium:**

Going for Gold: The Science Behind Sporting Success.

10 May EMBL Heidelberg

**Science and Society Forum lecture:**

Deadly Elixir: Science and the Promise of Immortality, Stephen Cave, Philosopher and Writer, UK

19 May EMBL Heidelberg

**EMBO | EMBL Symposium:**

New Perspectives on Immunity to Infection

22–23 May EMBL Grenoble

**Heads of Units/Senior Scientists Meeting**

23–26 May EMBL Heidelberg

**EMBO Conference Series:** Microtubules: Structure, Regulation and Functions

12 June EMBL Heidelberg

**Distinguished Visitor Lecture:**

David Barford, Institute of Cancer Research, Chester Beatty Laboratories, London

21 June EMBL Heidelberg

**Distinguished Visitor Lecture:**

Claude Desplan, Department of Biology, New York University, USA

25–27 June EMBL Heidelberg

**Summer Council Meeting**

5 July EMBL Heidelberg

**Lab Day 2012**

7 July EMBL Heidelberg

**EMBL Summer Party**

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



**Isabelle Kling** joins EMBL Heidelberg as project officer for CommHERE – a network of communications officers aimed at improving communication on the outcome of EU funded health research projects. Originally from Strasbourg, Isabelle gained a master's in Science Communication at Bordeaux University, and has held various positions in PR, press, and communications, in countries as far-flung as France, Canada and Sri Lanka.



**Carolina Garcia Sabate** is one of two new conference officers in the Course and Conference Office. With a background in biology, Carolina also has a master's in Science Communication and joins from a similar role at the Spanish National Cancer Research Centre. Also new to the department is **Diah Yulianti**, who joins from the climate change secretariat (UNFCCC) in Bonn. She has a degree in Indonesian Literature and has held similar positions in public organisations in Europe and Asia. Carolina and Diah both have a passion for food, and are eager to introduce cuisine from their respective home countries to the EMBL cooking club. They look forward to working in EMBL's international and multidisciplinary environment, and contributing to the success of the lab's broad range of scientific events.



## Celebrating women in science

For International Women's Day on 8 March, EMBL-EBI Director Janet Thornton passed a jewellery heirloom to Sarah Teichmann of the MRC Laboratory of Molecular Biology to mark her significant contributions to science.

Sarah, a structural biologist, is one of several leading researchers to be recognised in an annual ceremony initiated by the UK's MRC Clinical Sciences Centre in 2010.

She was nominated by Janet, who was awarded the honour last year. The aim is that the heirloom is passed down each year from one scientist to another.

The heirloom is a handcrafted brooch that commemorates a century of women in the life sciences. The design references the suffrage movement of the early 20th Century, in which men and women fought for equal voting rights.

