

EMBL *etcetera*

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Balancing act

More than 300 scientists, journalists and members of the public convened at EMBL Heidelberg 9–10 November to discuss one of the most challenging issues facing mankind: the increasing number of species of plants and animals under threat of extinction. The diverse programme for this year's Science and Society conference brought together expertise from areas including research, policy, public health and philosophy. The event gave participants the opportunity to voice opinions, hopes and concerns in relation to biodiversity.

[See page 10](#)

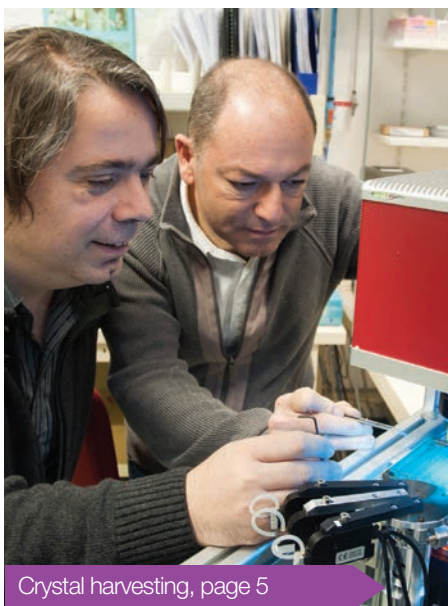


7

Meet the new head of EMBL Monterotondo

Science in a new light

Last experiment on the DORIS synchrotron, P-CUBE draws to a close, and the story behind a new crystal harvesting technology



Crystal harvesting, page 5



DORIS retired, page 4



P-CUBE legacy, page 3

Reviews, rewards and renewals

Important decisions made at Winter Council Meeting in November

An eventful Winter Council Meeting took place in Hamburg, with delegates discussing and voting on a large number of lab-based issues. Highlights included the announcement of positive reviews of EMBL Heidelberg's Genome Biology Unit and EMBL Monterotondo's Mouse Biology Unit, a special contribution from the Luxembourg government to fund joint projects, agreement to take the next steps towards a new outstation, and the appointment of Claudio Sunkel as the new Chair of Council.

[Find out more on page 2](#)

9

John Kendrew Award winner

11

The greatest story never told?

12

What sci-fi stocking filler would you give?

Winter Council Meeting: Reviews, rewards and renewals

Delegates took part in an eventful Winter Council Meeting in Hamburg, 27–28 November, where they approved EMBL's 2013 budget and discussed, voted on, and announced key lab-related developments, including:

First-rate unit reviews

The Scientific Advisory Committee (SAC) announced that their recent review of EMBL Heidelberg's Genome Biology Unit found research "of the highest calibre, comparing favourably with the best work of this type being executed at other leading biomedical research institutes around the world." Meanwhile, a recent review of EMBL Monterotondo found the productivity of EMBL's Mouse Biology Unit "outstanding", with the SAC panel acknowledging the significant contribution of former head Nadia Rosenthal to the success of the Unit (see page 7).

Special Luxembourg contribution

Council welcomed a special contribution of 500 000 Euro from the Luxembourg government to promote scientific collaborations between scientists from Luxembourg and EMBL. The funding will be used to co-

finance research projects jointly selected by EMBL and Luxembourg's National Research Fund (FNR).

Steps towards an outstation in Spain

SAC gave support for moving forward with a proposal to establish a new EMBL outstation focused on tissue biology and disease modelling in Spain. Council approved the development of a detailed financial plan and draft host site agreement for future assessment.

New lab equipment

Scientists in the lab are to benefit from some new tools, including a third-generation sequencer; a Thermo TSQ Vantage mass spectrometer; and an upgrade of the Titan Krios Camera and Zeiss 2 Photon microscope.

Comings and goings

EMBL Director General Iain Mattaj thanked outgoing Council Chair Eero Vuorio (Finland) on behalf of the lab for chairing Council over the past four years. Claudio Sunkel (Portugal) has been elected as the new Chair. Iain also paid tribute to a host of outgoing and incoming SAC members and Council delegates.



Clockwise from top: EMBL staff and Council members gathered in Hamburg; new Council Chair, Claudio Sunkel; outgoing Chair, Eero Vuorio

Prestigious grant-funded projects



Can your gut bacteria make you chronically ill?

EMBL Heidelberg's Peer Bork is a key partner in METACARDIS, a European funded project coordinated by Inserm that aims to shed light on possible correlations between the gut microbiome and chronic illness. The five-year project has 14 partners from six countries. Aims include the location of bio-markers that could inform treatment and enhanced understanding of pathways.



Molecular mechanisms of ageing

A new EU-funded project coordinated by EMBL Heidelberg's Anne-Claude Gavin will bring together an international network of experts to study ageing in adult stem cells at the systems level. The five-year, 6 million Euro SyStemAge project will integrate a wide range of technologies from academia and industry with the aim of understanding the molecular mechanisms underlying ageing.



Understanding the integrity of the immortal lineage

A 1.5 million Euro grant has been awarded to EMBL Monterotondo's Dónal O'Carroll to study the role of non-coding RNAs in mammalian male germ cell development and spermatogonial stem cell homeostasis. Funded by the European Research Council (ERC), the five-year project seeks to address basic questions on the intersection of non-coding RNA function and germ cell development and maintenance.



Genetics underlying complex traits

Funded through an ERC Advanced Grant, EMBL Heidelberg's Lars Steinmetz will study traits conditioned by multiple genetic and environmental factors, which underlie the vast majority of genetic diseases. The 2.5 million Euro award will enable the development of systematic genome-wide technologies that aim to identify all of the variants underlying a complex trait in a single step.

Sustaining science funding

The directors of EIROforum have emphasised the importance of secure funding for science in Europe to promote innovation, productivity and competitiveness. After gathering to mark the 10th anniversary of the organisation – a partnership of the eight largest European inter-governmental scientific research organisations – its leaders, including EMBL's Iain Mattaj, wrote an open letter emphasising the positive impact of science investment on economic growth, and urging the EU's institutions and member states to ensure that the science budget remains strong.

Hosted at the Institut Laue-Langevin in Grenoble, which currently holds the rotational EIROforum presidency, the anniversary event was part of the General Assembly of the Directors General of EIROforum. Anne Glover, Chief Scientific Advisor to the President of the European Commission, and Anneli Pauli, Deputy Director-General for Research and Innovation at the European Commission, took part in a special debate at the event.



ELIXIR gains momentum

ELIXIR is developing a pan-European research infrastructure for the sharing of life sciences data and continues to progress rapidly. EMBL and 14 member states have now signed the Memorandum of Understanding, with Portugal being the latest country to demonstrate its commitment.

“Bioinformatics is critical to life science research, and is pivotal to Portugal’s long- and medium-term science and technology strategy,” explains Miguel Seabra, President of Fundação para a Ciência e Tecnologia in Lisbon. “Our government and national funding agencies are keenly aware of the potential long-term benefits – both financial and scientific – of participating in ELIXIR. As a pivotal research infrastructure, it sits at the crossroads of health, natural resources and marine biology – areas where Portugal has particular interests.”

The members of the ELIXIR Interim Board are currently working towards the International Consortium Agreement, which will specify ELIXIR’s governance. Each of the ELIXIR member states has submitted an application to operate an ELIXIR Node and

these applications will be considered by ELIXIR’s Scientific Advisory Board at their first meeting, which takes place as *EMBL&cetera* goes to press.

At its recent meeting, the ELIXIR Interim Board agreed a Hub operating budget for the balance of 2012 and for 2013, which means that the search for ELIXIR’s Founding Director, who will manage all aspects of the infrastructure, is now under way.

As ELIXIR transitions from the preparatory to the implementation phase, technical work is beginning. Five technical pilot projects have been initiated to act as test beds for integrating services between the nodes and the hub. One such project connects the Human Proteome Atlas (HPA) in Sweden with EMBL-EBI resources run from Hinxton.



P-CUBE boosts access to protein production

Users and providers participating in the EU-funded infrastructure access project P-CUBE (protein production platform) convened at EMBL Heidelberg on 22 October to discuss a wide range of scientific projects completed through the platform.

The well-attended meeting began with a rousing keynote lecture from Stephen Knapp of Oxford University on the development of selective chemical ligands by family-wide structural analysis of human proteins. Presentations during the event focused on research and service activities developed during the four-year project,

covering areas such as cloning, expression and crystallisation.

P-CUBE, which ends next year, has opened up access to facilities, expertise and technologies at many labs, including EMBL sites in Hamburg, Heidelberg and Grenoble, as well as the universities of Zurich and Oxford. “P-CUBE has presented opportunities for scientists in Europe to access facilities and expertise that have helped to support some highly successful research projects. A key aim now is to continue this legacy through other platforms such as BioStruct-X,” says project manager Petra Lindemann.

The structural biology of tubulin

To grow 3D crystals of this protein it is necessary to control its assembly in microtubules very tightly. Designed Ankyrin Repeat Proteins (DARPs), invented in the Plückthun lab (University of Zurich), have the potential to bind tubulin and prevent its assembly. In the course of a P-CUBE sponsored stay in Zurich, DARPs were selected that fulfill these tasks. It is now planned to use them to study endogenous regulators of microtubule assembly dynamics.

– Marcel Knossow, Benoît Gigant, CNRS

Procollagen trimerisation

By providing access to the transient mammalian expression and high-throughput crystallisation facilities developed at Oxford, P-CUBE played a decisive role in solving the long-standing mystery of procollagen trimerisation. Using this setup, CNRS researchers from Lyon, France were able to determine the first 3D structure of a procollagen C-propeptide trimer, revealing the mechanism of specific chain recognition as well as the structural basis of numerous genetic disorders of bone, cartilage and skin.

– David Hulmes, University of Lyon

A great project to lead

P-CUBE has successfully provided access to its most advanced facilities for the production, purification, characterisation and crystallisation of proteins. European experts in the field of protein expression, biophysical characterisation and structural biology offered expertise and know-how to numerous European users. Many techniques were optimised and further developed during the project and are now successfully integrated in the platforms, thus improving the service offered to the users.

– Markus Grütter, University of Zurich

Light legacy

After 38 years of operation, the DORIS synchrotron ring on the DESY campus in Hamburg has retired. *Rosemary Wilson* considers the impact DORIS has had for EMBL Hamburg.

At precisely 8am on Monday 22nd October 2012, DORIS finished work on her very last experiment. Some looked back with a wistful tear in the eye but most will remember a legacy that continues to have profound impact on both particle physics and research with synchrotron radiation. Studies using DORIS have given insight into an immense spectrum of research: magnetic nanostructures, viruses, corals, even hidden paintings by Vincent van Gogh. The synchrotron has also contributed significantly to the emergence of crucial techniques and innovations in structural biology.

“Since 1974, DORIS has been a central part of EMBL Hamburg’s life and work”

Ever since EMBL Hamburg opened its doors for scientific business in 1974 as EMBL’s first outstation, DORIS has been a central part of its life and work. The concept of keeping accelerated particles within the ring for repeated collisions was only just emerging, in contrast to the practice of shooting them at the target all at once. But research at the facility was already helping to realise the pioneering vision of Ken Holmes to use synchrotron radiation (a useful ‘waste product’ of physics experiments) for biological research.

Increasing demand for access to facilities from biologists led to new equipment and beamlines being added to the ring, and by the end of the 1970s the outstation had emerged as a leading facility in the field of biological synchrotron radiation research. DORIS remained at the heart of this success, and it was this adaptability that will perhaps define the synchrotron’s legacy. By 1982, engineers working with the beamlines had nearly



DORIS images courtesy of DESY

doubled their energy collision power, and these improvements facilitated the development of the first online imaging plate scanner for protein crystallography by researchers at EMBL, an innovation that is still used by scientists the world over.

In 1991 DORIS underwent a third ‘reincarnation’ and was converted into a dedicated synchrotron radiation facility – one of Europe’s brightest hard X-ray sources – sparking another new era of research. By the turn of the millennium, the outstation was hosting up to 500 external users a year. Nearly 15% of all biological macromolecular structures determined world-wide were done so in Hamburg. And there was more to come. Even as advanced synchrotron radiation facilities

were established around the globe, DORIS remained an important workhorse. EMBL Hamburg operated six experimental stations with applications in structural biology at the ring – five for macromolecular crystallography and one for small angle X-ray scattering – four of these right up until final shutdown.

In recent years, focus has moved away from DORIS to the design and construction of beamlines at the newly refurbished PETRA ring. Yet even then she served as a crucial test bed for development and configuration of the new beamlines. While the lights have now been switched off, we are left with nearly four decades of developments, without which the bright future awaiting us at PETRA would not be possible.

A vision for X-ray laser applications



On 25 and 26 October, 30 delegates gathered in Hamburg for the first Biology Infrastructure Life Science Centre (XBI) consortium meeting. The meeting included talks on the scientific vision of the project and a closed session focusing on its management.

Since 2011, EMBL group leaders have been actively involved in shaping the future of X-ray laser applications in the life sciences. In September 2011, a Memorandum of Understanding was signed between EMBL and the European XFEL – an X-ray Free Electron Laser currently under construction in Hamburg. Subsequently, EMBL proposed a project to construct, commission and operate XBI at the European XFEL site, to facilitate the

preparation, analysis and interpretation of biological experiments in immediate proximity to the XFEL instruments. The proposal, coordinated by group leader Victor Lamzin, was positively received by the XFEL Scientific Advisory Committee, and in March 2012 a full proposal was submitted.

“The use of XFEL will revolutionise the way scientists visualise biological events, at the level of large complexes and sub-cellular components, as well as their dynamics and processes; it will open up a world of new and exciting research opportunities to the biological community,” says Victor. “It was good to sit down together after so much preparation and we look forward to working together on the project.”



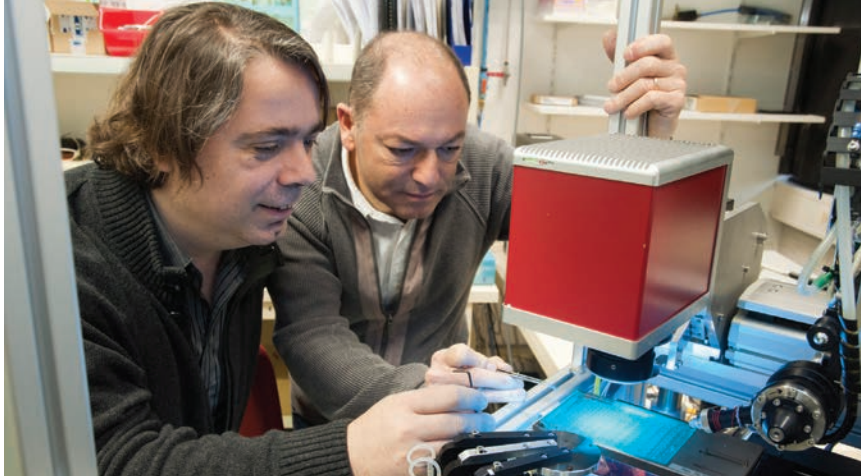
Direct hit

Grenoble researchers develop automated crystal harvesting technology, Crystal Direct™

Three years ago EMBL Grenoble team leaders Florent Cipriani and Josan Márquez were standing next to a blackboard in the lab chalking down their thoughts on a frustrating problem: how to automate the removal of crystals from solution and have them ready for X-ray analysis. It seemed a formidable challenge: while the teams have successfully developed automation technologies in areas such as screening and data collection, crystals still have to be painstakingly hand-removed using nylon loops. But reflecting on their sketches, Florent and Josan struck upon an idea: Why not grow the crystals within the nylon loops? “We modified our equipment, and it worked,” says Florent.

However, they still had to find a way to ensure that crystals could be collected safely. “We put a thin layer of film on the crystallisation plate that could be cut using a laser and used a pin controlled by a robot to collect the film complete with the crystal,” explains Josan. “We found that a complicated manual process became far more straightforward.”

While the idea worked on paper, transform-



Josan and Florent with the new technology. While the idea was straightforward, realising it has involved a complex mix of physics, mechanics, electronics and software

ing the machine into reality has required three years of persistence, patience and belief. “We had to address issues such as the properties of the film, optimisation of the new crystallisation plates, and identifying a laser that did not damage the crystals,” Florent explains. “We travelled to many institutes to experiment with different lasers and spoke to a lot of people to get it right.”

“Eventually labs around the world could have this technology in their own facilities”
– Josan Márquez

The prototype machine, details of which have been published in *Acta Crystallographica*, enables rapid automated harvesting of large numbers of crystals and microcrystals – a

huge boon for the increasing number of studies that use hundreds or even thousands of crystals in a single project. The approach removes a bottleneck between crystal identification and analysis – potentially benefiting all crystallography studies – and, moreover, presents new opportunities to facilitate crystal treatment, including cryo-protection.

“Our aim is to work with users to develop software tools to help them interface with the machine,” says Josan. “We want users to be able to position crystals, decipher how they want to harvest them, transfer them directly to the synchrotron, and even adjust aspects that modify crystal quality, such as water content. Eventually labs around the world could have this technology in their own facilities.” See it in action: www.embl.fr/instrumentation

Research highlights

My microbes

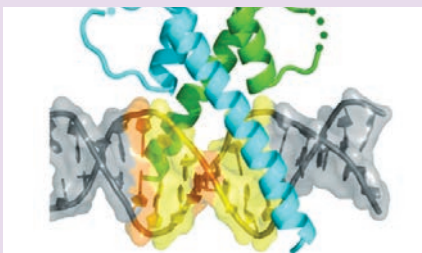
Research published in *Nature* in December by the Bork group has revealed that our gut bacteria’s collection of genomes is unique, and remains stable over time. They used innovative computational tools to analyse gut microbiota at high resolution.

Unzipping melanocyte regulation

Scientists led by EMBL Hamburg’s Matthias Wilmanns have solved the structure of a transcription factor crucial in the development of melanoma. Published in *Genes and Development* in December, the study could enhance research into treatments for some important hereditary diseases and cancer.

Map of genetic variation

The 1000 Genomes Consortium, which includes EMBL-EBI’s Paul Flicek and EMBL Heidelberg’s Jan Korbek on its steering committee, published an integrated map of genetic variation from 1092 human genomes in *Nature* in November. See the next edition for an interview with Jan and Paul.



New stem cell bank

The Human induced Pluripotent Stem Cell Initiative (HipSci) was launched this autumn, funded by £12.75 million from the Wellcome Trust and Medical Research Council. The project partners are working on a catalogue of high-quality adult stem cells that will serve as a knowledge base for researchers studying the effects of genes on health and disease.

“Using the flexibility of stem cells to understand individual differences is an exciting prospect,” says Ewan Birney of EMBL-EBI, who is leading the HipSci data coordination team. “HipSci will be producing and sharing a huge amount of high-quality data and information that will take this important area forward.”

HipSci will generate and analyse induced pluripotent stem cells from healthy volunteers and patient groups. The resulting collection and data will be a comprehensive resource for investigating how diseases linked to specific genetic defects can result in a spectrum of clinical abnormalities. HipSci hopes to enable researchers to exploit the technology made possible by the discoveries of John Gurdon and Shinya Yamanaka, who received a Nobel prize for their research into changing adult cells into stem cells. www.hipsci.org



Image courtesy of Claudio Muffarege

Deciphering the wheat genome

The first analysis of the complex and exceptionally large bread wheat genome, published on 29 November in the journal *Nature*, could be a significant development in breeding wheat varieties that are more productive and better able to cope with disease, drought and other stresses that cause crop loss. The study identifies around 96 000 wheat genes and delves into the links between them.

The team sifted through vast amounts of DNA sequence data in order to translate

the sequence into practical information for research scientists and plant breeders. They developed a new strategy to compare

“The wheat genome is of tremendous importance to food supplies worldwide”

– Paul Kersey

wheat’s genetic sequences to known grass genes (for example from rice and barley), and then to compare these with the simpler genomes of wheat’s ancestors. They found

wheat to be a highly dynamic genome that has undergone genetic loss as a consequence of domestication.

“The wheat genome is among the final frontiers of genomics and is of tremendous importance to food supplies in Europe and worldwide,” said Paul Kersey, Head of Ensembl Genomes at EMBL-EBI. “This assembly is a significant step towards deciphering the wheat genome.” The data are freely available in Ensembl Plants.

plants.ensembl.org

CRAM: big data gets the squeeze

EMBL-EBI has launched the next generation of software for the compression of sequencing data. CRAM makes it possible to reduce file size dramatically and lets users work with sequence data files in their compressed form.

Guy Cochrane of EMBL-EBI, who leads the European Nucleotide Archive (ENA), explained that the motivation for developing CRAM was the need to control storage costs. “In the beginning, this was a way to solve a problem for the ENA. But there is a clear utility for anyone facing their own data storage challenges, for those computing on large data sets, and for those transferring data around networks like GEANT and JANET.”

CRAM works in two modes: ‘lossless’ compression and ‘lossy’ compression. In ‘lossless’ compression, although disk space is saved, the original data are fully preserved. But going a step further, users who choose ‘lossy’ compression can apply a controlled loss of precision to achieve compressed files that are dramatically smaller.

“The most exciting part of this is that we can manage and store future big data confidently and sustainably over the next five to 10 years,” says Guy. “We can run the ENA more sustainably because we can compress the data more efficiently.”

Broadening horizons at the PhD Symposium

The 14th EMBL PhD Symposium, ‘Networks in the Life Sciences: Genomics Proteomics and Systems Biology’, took place 25–27 October. The symposium is organised each year by a committee of PhD students, who choose the subject and speakers, and organise logistical aspects including transport, catering, finance and PR. This year, the event featured talks by senior investigators and PhD students, who also had the chance to showcase their work in poster sessions, including prizes for the best posters in each category.

For the student-led organising committee the experience is invaluable, providing a unique opportunity to test

and develop practical skills such as effective scheduling, delegation and team management. The quality of the speakers attracted this year was both surprising and gratifying. Some of the biggest names in each of the three subjects were present, and the discussion panels on each day were lively and well received.

Finally, and most importantly, feedback from participants was overwhelmingly positive. One registrant commented that her horizons had been broadened hugely by participating – a remark confirming that this year’s symposium has successfully achieved its main aim.

– Dermot Harnett



Organising Committee of the 14th EMBL PhD Symposium

The Italian Job

This year, EMBL Monterotondo welcomed Phil Avner as new head of the outstation. Arriving just in time for a Scientific Advisory Committee review, he reflects on the challenges and opportunities ahead at EMBL's Mouse Biology Unit

What is your background?

I have diverse experience: my research career has moved from yeast genetics, to mammalian genetics, to embryonic stem cells and development, to mouse genetics, and through to epigenetics. This is useful in managing the outstation, which has wide-ranging research topics. It is also important experience in terms of advising others – senior scientists have a responsibility to mentor and inspire the large numbers of talented young researchers at EMBL. I like the stimulus of being abroad and being out of my comfort zone: I am a Brit, but have spent the past two

Phil Avner spent the past two decades at the Institut Pasteur in Paris, first as head of the Mouse Molecular Genetics Unit and then as head of the Developmental Biology Department



decades at the Institut Pasteur in Paris. Rome is a special place, and being at EMBL presents the opportunity to benefit from working in an international community while also doing high-level science.

What did you learn from the SAC review?

It was an interesting and balanced evaluation committee, supportive of the research going on at EMBL Monterotondo. There have been a number of personnel changes since the last review in 2008. Established groups are performing well, while our newer groups are opening up opportunities to pursue new research avenues.

It is clear that there are a number of strengths we can build on in the future, particularly in areas such as neurobiology, epigenetics and genetics. In neurobiology, for instance, there are a huge number of approaches that aim to understand the complexity of the brain. However, while there

“Senior scientists have a responsibility to mentor and inspire young researchers”
– Phil Avner

has been significant progress in neurodegenerative diseases in identifying the genes involved in disease, there is much more to learn about the mechanisms of what is actually happening – how thought processes work or how we respond to outside stimuli. Some techniques such as neuroimaging are providing new opportunities to do this, however this then puts an emphasis on having experimental systems that correctly reflect what is happening in the human – in

health and disease – this is the kind of area we are focused on in Monterotondo.

What's next for EMBL Monterotondo?

Nadia Rosenthal did a great job of building up EMBL Monterotondo from practically nothing to the excellent research campus that we have here today. My challenge is to provide further impetus to those achievements. We have a strong facilities and services infrastructure in areas such as transgenesis, gene expression, histology, and imaging – as research requirements evolve in the lab, we need to develop and eventually add to these. It will be important to consider, for instance, what further needs to be done in developing bioinformatics access and services, both on campus and by interfacing with the remarkable services at EMBL-EBI. I am very interested in developing a better integration of EMBL Monterotondo with the Italian scientific community, particularly through more collaborations between the lab and local researchers – an approach that works very well at other EMBL sites. Other initiatives could involve our seminar programme, which provides the opportunity for researchers and students to meet some of the most prominent scientists in the field; it would be great to open up some of these seminars to an even wider audience, beyond the outstation. At another level, it is also important for us to raise the profile of the lab further amongst the mouse biological community, although some of the work in the lab also focuses on broader mammalian biology.

⇒ EMBL Council found the productivity of the Monterotondo outstation “outstanding” in its recent SAC review (see page 2).

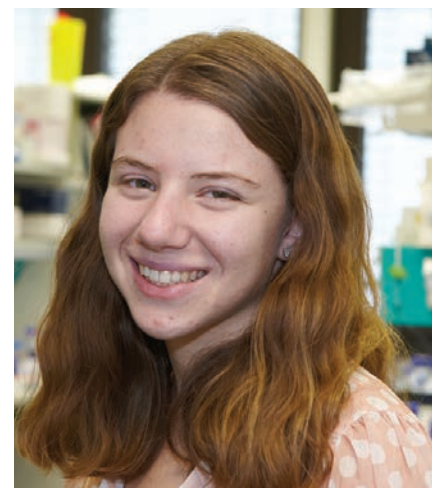
EMBL in fast forward

A student from Princeton University got a frenetic flavour of life at EMBL in October, coming away with new insights into molecular biology and other aspects of life in the lab. Erica Portnoy, who was awarded a week-long placement at EMBL Heidelberg after winning the biology category of the European Union Contest for Young Scientists, explains that she embarked on a “speed tour” of the lab.

“I have seen areas of biology that I did not even know existed. One group showed me how microfluidics, for instance, can be used in areas as diverse as chemistry and engineering,” Erica explains. “This interdisciplinarity is a theme I found running through the lab, and

I now have a much stronger appreciation of the broad variety of biological studies that my own field, computer science, is applicable to.”

Competing against a strong field of young scientists from around the world, Erica's novel project used photo cross-linking to map protein interactions during pilus biogenesis. The contest aims to enable young researchers to meet and work with some of the most prominent scientists in Europe. Her trip included visits to scientists from all units and career stages. “People here are passionate about their research, communicate it well, and the mix of hard work and social activities creates a great atmosphere on campus,” she says.



Meeting in Monterotondo

Mediterranean sunshine, food and spirit made for an excellent staff-alumni event at EMBL Monterotondo on 23 November. This was the second year that local alumni were invited to meet staff at an outstation in combination with an EMBL Alumni Association (EAA) board meeting.

Phil Avner, new Head of EMBL Monterotondo, warmly welcomed alumni to EMBL's youngest and smallest outstation, asking them to help the outstation strengthen its links with scientists and institutes throughout Italy.

The excellent turnout was a great way to conclude an already successful Alumni Association board meeting. Key decisions reached included the selection of the 2013 John Kendrew Young Scientist Award winner, and plans for a series of local chapter events to celebrate EMBL's 40th anniversary, including an anniversary reunion programme, scheduled for 18–19 July 2014 at EMBL Heidelberg.



“It was a real pleasure to meet the board for the first time and to appreciate the commitment that alumni have to EMBL, as well as the richness of their souvenirs and ‘vécu’ from their EMBL careers.”

– Phil Avner



Above: EAA board member Gareth Griffiths and alumnus Giovanni Morrone. Left: board Chair Giulio Superti-Furga and Deputy Head of outstation Cornelius Gross

“The meeting highlighted the importance of the Alumni Association. From Des Higgins I learnt of the challenges currently facing Irish research and of EMBL's importance to Ireland. To celebrate our reciprocal contribution, we plan to hold a one-day conference in Dublin to coincide with EMBL's 40th anniversary.”

– Dónal O'Carroll, group leader



Above: board member Sarah Sherwood, alumna Laura Ciapponi and Head of outstation, Phil Avner. Below: board member Des Higgins and group leader Dónal O'Carroll



A collaborative spirit



Patricia Rodriguez-Tomé, one of EMBL-EBI's first recruits in 1994, is now a group leader at the CRS4 in south Sardinia, headed by EMBL-EBI's first Director, Paolo Zanella. Patricia flew from Sardinia to Rome to meet EMBLers past and present at the staff-alumni gathering at EMBL Monterotondo.

Why did you attend the get-together?

While at EMBL-EBI, I collaborated with Phil Avner as well as the EMMA project of the CNR Monterotondo, I therefore went to meet former colleagues as well as new EMBL Monterotondo PIs and local alumni. EMBL's Alumni Association is a good starting point when looking for collaborations and expertise. I had good discussions that I hope will lead to common projects.

What's special about your institute/work?

The CRS4 (Centro di Ricerca Sviluppo e Studi Superiori) is a multidisciplinary research centre, focussing on the application of technology and computational techniques to the life sciences. It has the most powerful high-performance computing centre in Italy, and a genomic sequencing centre.

My group helps to collect and organise data that can be analysed, published and sent to the public databases at EMBL-EBI. We are currently working with the next-generation sequencing group to develop a Laboratory

Information Management System (LIMS) that manages projects and tracks samples and experiments. It is being implemented in local laboratories doing metabolomics, chemistry and even archaeology.

Tell us about your time at EMBL-EBI?

I was one of the first recruits at EMBL-EBI. I learnt how to work with people from all over Europe, about different customs and food like haggis! I learnt the importance of a collaborative spirit, which certainly shaped my future in a service-oriented direction.

How can we enhance these meetings?

I'd like to know more about the research of other alumni. It would be interesting to add a scientific orientation to the 'fun' event, where we can discuss everyone's projects, exchange ideas and look at possible collaborations.

How does the CRS4 celebrate Christmas?

We share panettone, pandoro and sparkling wine. Do come and visit us, or at least our website: www.crs4.it.

Looking back and forth

Alumni Relations highlights 2012

- Highest ever number of alumni events, held in eight countries, involving more than 300 staff and alumni in total.
- Superb feedback from local chapter participants for future events, and excellent alumni representation of EMBL in the member states.
- Launch of a powerful search engine for the members directory, offering more advanced ways to find EMBL alumni: www.embl.org/alumni/membersdirectory.
- Launch of the EMBL alumni google map, offering a user-friendly overview of alumni distribution, and an invitation to reduce the 'list of the lost' (over 100 found in less than five months): www.embl.org/alumni/map.
- Successful and fun community-building events, from alumna Jacqueline Mermoud's fundraising trek up Mount Kenya to a run against cancer in support of alumnus Jörg Fleckenstein's initiative at Heidelberg's National Center for Tumour Diseases.

Alumni Relations goals 2013

- Increase known residence of alumni from 56% to more than 65%.
- Increase number of EMBL Alumni Association members from 38% of all alumni to over 50%.
- Mobilise the international alumni community for the 2014 celebrations of EMBL's 40th anniversary in the member states. Please contact Alumni Relations: alumni@embl.org.

Mark your diaries

13 June EMBL Heidelberg
21st EAA Board Meeting

14 June EMBL Heidelberg
John Kendrew Award Ceremony

21 November EMBL-EBI
22nd EAA board meeting

22 November EMBL-EBI
Staff-alumni event

Dates for 2013 local alumni meetings will be announced early next year. For further details please visit www.embl.org/alumni or contact alumni@embl.org.

John Kendrew Award winner 2013

Alumna Katharina Ribbeck, now Eugene Bell Career Development Professor of Tissue Engineering at MIT, is announced winner of the John Kendrew Young Scientist Award 2013

"I am thrilled to receive this prestigious award," said Katharina after learning of the announcement. "The tradition of this award is testament to the tight bond between EMBL and its global alumni community. It will give an understudied field of science a big boost as it continues to unfold."

Katharina's group studies the body's first line of defence, mucus, focussing on its selective properties and those of other biological hydrogels: "There was (and still is) a glaring gap in our knowledge about hydrogels and this topic offers a great opportunity for basic discovery and cutting-edge applications." An exciting new challenge is to implement the lessons learned from nature to create new types of synthetic filters with tailored selectivity. "MIT is a great community for this and we work closely with materials scientists and engineers," she reveals.

As well as acknowledging Katharina's insight and courage to start a new field of research, the John Kendrew Award selection committee highlighted her creative and innovative science outreach. Katharina works hard to increase public awareness of the importance of mucus for health and disease: "People commonly consider mucus a waste product, and one reason for this is the general lack of



publicly available scientific information on crucial facets of mucus functions. I am trying to change this by giving talks to teachers and nurses, designing hands-on shows, making videos, and working on a book for children."

Katharina, a former joint postdoc from the Mattaj and Ellenberg labs fondly remembers her time at EMBL: "There was a strong synergy between the different labs, and an intensity among students and group leaders," she says. "You could come in at any time of the day and the labs were buzzing with activity. There was little sense of hierarchy and everyone shared a love of science."

Amaicha delivers on Argentina

Shortly before receiving the John Kendrew Young Scientist Award last year, Amaicha Depino promised EMBL Director General Iain Mattaj to organise a conference promoting EMBL in Argentina. Together with two other EMBL alumni – Lazaro Centanin (based in Heidelberg) and Ignacio Sanchez (also based in Buenos Aires) – Amaicha delivered on her promise with a three-day symposium from 5–7 November at the University of Buenos Aires. A total of 100 participants passed through the event, despite the unusually hot temperature (40°C in November).

"It was a real pleasure to host this symposium in Buenos Aires," says Amaicha, now Group Leader at the Institute of Physiology, Molecular Biology and Neuroscience (UBA-CONICET). "It was amazing to see the enthusiasm of all EMBL group

leaders and the Director General in sharing their science with local researchers and students. I hope that, along with the contacts made by EMBL with CONICET and the Ministry of Science, this symposium will help to strengthen scientific cooperation between EMBL and Argentina."

"Amaicha and her colleagues helped organise a fantastic combination of meetings with life scientists of all ages and decision makers. Both were extremely useful for EMBL and, I hope, Argentina," says

Iain. During his visit, the Director General signed a Memorandum of Understanding with the

Argentine Ministry of Science, with the objective of enhancing cooperation between EMBL and Argentina.



In the balance

Annual Science and Society conference debates origins, nature and future of biodiversity

Growing concerns about the increasing number of species of plants and animals under threat of extinction were addressed during a diverse programme, which brought more than 300 participants from around the world to EMBL Heidelberg for a two day event, 9–10 November.

‘Biodiversity in the Balance: Causes and Consequences’ focussed on four broad topics, addressing questions such as why the living world is so diverse; assessing and recording biodiversity on the planet; current evidence of biodiversity decline; and political response. The goal of the annual science and society conference, which is jointly organised by EMBL and EMBO, is to raise consciousness and facilitate dialogue between members of the public, the media and experts from a broad range of fields.

Specific focus areas included malaria research (Rita Colwell, University of Maryland), palaeontology (Michael Benton, University of Bristol), studies of ocean microorganisms (Eric Karsenti, EMBL and Colomban de Vargas, Station Biologique, Roscoff), and the role of microbiota in public health (Tari Haah-tela, Helsinki University). The audience were engaged in active and lively discussions with speakers on topics ranging from the scale of extinction and political inertia to how people might be empowered to act.

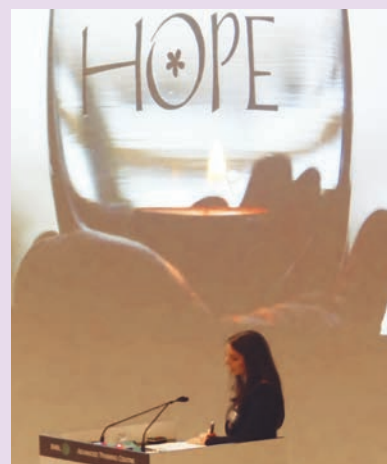


‘Bring people to the table’
Heidi Wittmer, Helmholtz Centre
for Environmental Research

“ There is a lot of unused potential that we could develop to improve the situation, but many political responses are inadequate. At the national level it is important that efforts are made to get processes moving, and to bring scientific and other knowledge on to the table in making a difference in policy. At the local level there are a lot of people interested in biodiversity and it is important to connect with them: the more awareness and involvement, the easier it will be to stem the decline. ”

‘Take the difficult decisions’
Rebecca Miller, International Union
for the Conservation of Nature

“ One thing that came out in the panel discussions is that people have a fascination with the natural world. There were some very tough questions that we do not have answers to, such as how do you decide what to protect? It is going to be a difficult journey, but we can get there. Conservation science has come along way in just 30 years. We need to make people realise that something can be done, to take the difficult decisions, and deliver funding needed to address the problems. ”



➤ The 14th EMBO | EMBL Science and Society Conference, ‘Public and Private Health – Genomics, Medicine and Society’, will take place at EMBL Heidelberg, 7–8 November 2013

Press pack

‘Diving into the life sciences’, was the motto of a one-day tour of 15 German journalists to EMBL Heidelberg in November. Organised jointly by Germany’s national academy of sciences, Leopoldina, and EMBL’s communication team, the aim was to introduce molecular biology to journalists with no scientific background. Reporting for the national public radio, broadsheets and women’s magazines, the journalists appreciated Matthias Hentze’s talk on the basics of molecular biology, followed by latest research findings presented by Jan Korbel, Peer Bork and Matthias Hentze. “It was a particular challenge, since these journalists had no scientific background, but we mastered it well and as a result, EMBL research featured in several radio interviews and broadsheet articles,” says EMBL’s head of communication Lena Raditsch.



The greatest story never told?

The tale of human evolution begins in its unknowable past and rolls on mysteriously for six or seven million years. Most of the text is missing; readers have just an occasional sentence taken haphazardly from the storyline. Yet through these fossilised scraps, scientists are increasingly learning about the twists and turns along the way – issues that Jean-Jacques Hublin considered during a Science and Society lecture at EMBL Grenoble on 24 October.

“More and more, we are able to understand the biological rationale explaining how evolution flowed amongst the many different species of ancient hominids,” says Hublin. “We can access information that was inconceivable just 10 years ago. It has been known for some time that human evolution is not a linear process, it is more like a tree with species sprouting in all directions. Many of the branches are missing, and it is up to us to try to fill in the picture.”

Rather than just looking at bumps or holes on ancient bones, Hublin and his team at the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany, use a host of modern techniques – 3D imaging, biochemical analyses of fossils, high precision radiocarbon dating – to ponder what they see as the big questions in areas such as genes, cultures, cognitive abilities, languages and social systems of past and present human populations. To do this, they study material from places as far flung as Israel, Morocco, Siberia and South Africa. Studies hitting the headlines just this year include evidence of cultural interchange



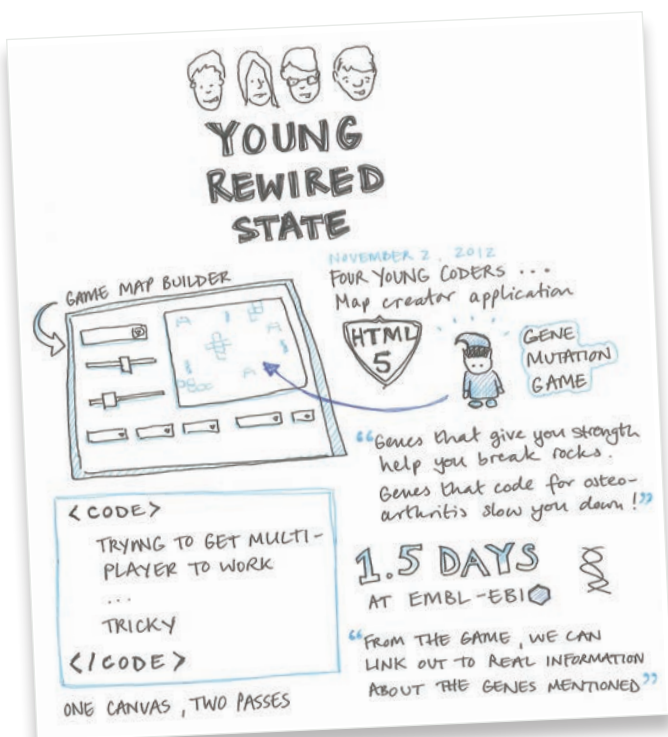
between humans and Neanderthals, new insights into African origins of the genus *Homo* and evolution of the human brain.

“We can access information that was inconceivable just 10 years ago”
– Jean-Jacques Hublin

“Humans have always been interested in the question of origins,” Hublin explains. “All societies have myths in relation to this; we have another story to deliver, which I hope is closer to reality. When you meet members of the public, there is an emotional side – there are many different beliefs about the way things were, and this can create some controversy.”

Other challenges exist: aside from the sparse availability of physical evidence, analysis re-

quires persistence, man power and expertise, all of which can be in relatively short supply. Yet Hublin is optimistic that answers to some of the biggest questions will continue to emerge from hidden parts of the narrative. “Studying the timing of development and maturation in different hominids, such as *Homo erectus* and Neanderthals, can help us to understand how they coped with different forms of social organisation and adapted to environmental challenges,” he says. “Another relates to the replacement by modern humans of other groups in Eurasia. There is debate about the impact of biological difference and cognitive superiority. One day we will know much more about the reasons underlying this and other puzzles.”



Sketchnote drawn by Francis Rowland during the group's presentation to EMBL-EBI staff at the end of their visit

Ready, steady, code!

In November four young coders spent a couple of days at EMBL-EBI, exploring the world of biological data and combining their programming skills to create a fun genetics-based online game.

With an open brief and only a short amount of time, Joshua, Simon, Michael and Jacob wowed EBI staff with their innovation and creativity when they showcased their game at the end of the two-day visit. With an imaginative take on genetics, the group developed a gene treasure hunt, where the collected genes either gave an advantage to the player, increasing their speed or strength, or hindered their ability to move around the zone of play. The group linked the featured genes back to information on their role in humans and other available information on the internet. Alan Smith, director of a local software firm, mentored the group and EMBL-EBI's Tony Burdett and Andy Jenkinson provided support and insight into software development on the genome campus.

The event was a reunion for the group who, over the summer, had participated in the national Young Rewired State initiative. Young Rewired State brings young developers aged 11–18 years old together to create innovative and useful applications utilising open data. Highlights of this year's Festival of Code can be found at www.youngrewiredstate.org.



Postdocs attend this year's retreat at Lake Constance

Retreat reflections

Participation, idea generation and creative space: retreats are an important way of connecting colleagues in an informal setting away from the lab. Here, two staff members give their impressions of recent EMBL retreats: the postdoc retreat to Lake Constance, and the Developmental Biology retreat to Bad-Rappenau, both in November

Postdoc retreat

More than 70 of EMBL's postdocs took part in two and a half days of scientific talks, roundtable discussions and social activities. Sessions included introductions to EMBL's Units, while postdocs also gave talks on some of the research highlights from EMBL groups during the past year. Roundtable sessions gave postdocs, who form approximately a fifth of EMBL's workforce, the chance to discuss issues such as fellowships, pensions, collaborations, communication, and life after EMBL. The mix of science and social was invaluable in connecting ideas from across EMBL sites.

- Alessandro Ori, Beck group

Developmental Biology retreat

The retreat brought admin staff and scientists together for networking and short presentations that helped enhance understanding of our respective work and responsibilities. The atmosphere was relaxed and friendly, and it was motivating to learn more about the high quality science that we are contributing to – talks were accessible, engaging and fascinating. Meeting together in this informal setting has enabled us to learn more about what we all do so that we can work more effectively together to maximise areas such as output and funding.

- Sonja Noss, grants officer

question&answer

What sci-fi stocking filler would you give for Christmas?



Gattaca (written and directed by Andrew Niccol)

The movie *Gattaca* from the late nineties is a classic in many ways. As the main character, Ethan Hawke plays a 'naturally' conceived under-class human in a not-so-distant future world where babies are selected by genetic pre-screening. The story revolves around the ingenious ways he fakes his genetic ID to be able to join a space mission. The science, such as on-the-spot whole genome sequencing and perfect prediction of all future defects at birth, is futuristic but not unthinkable. However, the lingering question is whether all scientific progress is really ethically desirable?

Koen Temmerman, postdoc, EMBL Hamburg



Schrödinger's Caterpillar (by Zane Stumpo)

A very funny story about downsizing consultant Graham Paint, whose life is turned upside down by an odd-looking caterpillar he finds and keeps in a matchbox. The caterpillar, like Schrödinger's cat, is a source of quantum ambiguity and spawns parallel versions of Graham whose paths cross and intertwine. The plot is beautifully clever, the characters great fun, and the digressions a joy. Highly recommended. Another Christmas suggestion is my own little book, a silly sci-fi comedy (containing some very dodgy science) called *The Ultimate Inferior Beings*, written by my quantum-spawned alter ego, Mark Roman.

Roman Laskowski, staff scientist, EMBL-EBI



Oryx and Crake (by Margaret Atwood)

While he swallows the last piece of mango, 'Snowman' wonders how he ended up alone next to a lagoon. As he untangles his memories, we get a glimpse of his past – a life he loved: a protected existence at the corporate compound, the Watson-Crick Institute for 'extraordinary' students, hybrid beasts called 'pigoons' raised to harvest organs, and a hidden romance. When everything collapses, one cannot help but wonder how this perfect society made by scientists could possibly have failed. What went wrong and why? I would recommend *Oryx and Crake* to anyone, especially those who enjoy black humour.

Sachi Okamoto, postdoc, EMBL Heidelberg

Management in science

When embarking on a career as an academic scientist, Antje Keppler did not know she would stray far from the classic path. Now, as scientific project manager for Euro-Bioimaging – one of the major European infrastructure initiatives – science continues to be a motivating force behind her work. In many respects the only real change is that now her focus lies in extending access to imaging technologies and training in techniques to scientists across the continent, rather than developing them herself.

“The job entails a whole host of different challenges, from negotiating with policy makers, to teaching, to administration, but in many ways it is also very close fit with a position in research,” she explains. “At first I was cautious about leaving the bench – I feared that once I had made the decision there would be no way to reverse it. But the good thing about science management is that you work very closely with researchers, while also engaging in a large range of other challenges.”

Initially, there were few road signs for Antje to follow – she was inspired after chancing upon a newspaper job advert – however, she forged a path that led from her postdoc at EMBL to a project management role at Heidelberg University Hospital. “During my postdoc it became clear that I wanted to do something beyond bench research,” she explains. “Reading the job description, I realised that I had many of the technical and personal skills that were being asked for, and suddenly something clicked: I could really imagine myself in a science management position.”

The transition from bench to office presented some unfamiliar challenges, but for Antje it felt like a natural progression. “The job was diverse and involved significant responsibil-



Antje works together with Jan Ellenberg at EMBL Heidelberg, who is the Euro-Bioimaging scientific coordinator for biological imaging. When it goes into operation in 2015, Euro-Bioimaging will be the European open access research infrastructure for biological and medical imaging, with technology platforms in all its partner countries. Currently, Euro-Bioimaging has 39 legal partners, 250 associated partners and more than 1400 interested stakeholders in over 28 countries: www.eurobioimaging.eu.

ity, such as organising evaluation procedures, writing funding proposals, developing departmental structures such as new administrative processes and implementing policy developments. For me it was an optimal starting position to learn about scientific management; at the time there were no university courses.”

“Suddenly, something clicked – I could really imagine myself in a science management position”
– Antje Keppler

Instead Antje grabbed learning opportunities when and where she could, taking part in workshops and courses on policy, administration, communication and more. After two years in the position, a combination of newly-developed skills and good timing brought her back to EMBL. “The role is a big adventure. There is a lot of travel involved and I have to

bring people together working in many different fields in order to realise the project’s goals. Moreover, we are now adding to our team and it is exciting to reflect on how the project has evolved from proposal, to planning, to – in roughly 12 months time – implementation.”

Science management positions come in all shapes and sizes, and she advises those considering joining the field to read up on the different possibilities. “Science managers are often involved in funding applications, teaching and administration, but the specifics of the job will depend on your direct environment and what is expected of you,” Antje explains. “Some roles involve managing huge research departments and this might mean you have to deal with long hours and long periods away travelling. Other positions, while maybe less high profile, can be equally rewarding, and it is worth identifying what you want from your job before considering your options.”



Deep insight

More than 280 school students and their teachers packed into the EMBL Advanced Training Centre auditorium on 7 December to hear EMBL senior scientist Eric Karsenti give this year’s EMBL Insight Lecture, on the mysterious world of plankton. The talk, also broadcast live to classrooms in countries as far flung as India, Mauritius, Hungary and Spain, addressed a wide range of questions relating to the role of marine microorganisms in areas such as ecosystems, climate change and ocean currents, as well as discussing the voyage and initial findings of the Tara Oceans Expedition. Participants asked questions and had the opportunity to meet Eric after the presentation. “Teachers have described the talk as inspirational and we hope it will encourage students to think more about the vital role of planktonic organisms for the world’s ecosystems and atmosphere,” explains Philipp Gebhardt, senior education officer for teacher training.



After nine years, Rachel Mellwig (Electron Microscopy Core Facility) and Lotta Maidment (EMBO) replace Doros Panayi (Photolab) as chairs of the Staff Association

A vital voice

Doros Panayi has recently handed over the reins to Lotta Maidment and Rachel Mellwig after nine years as Staff Association Chair. As the voice of employees across EMBL's sites, the Staff Association presents opinions, ideas and concerns of staff to Administration and EMBL Council, initiates social and networking events and represents EMBL in the international staff associations platforms. Whether you have personal concerns, want your opinion heard, or have an idea for a new society or club, the Staff Association is here to help. Rachel, Lotta and Doros put forward their top tips for getting the most out of your Staff Association.

- 1 **Contact the Staff Association in complete confidence:** if you have a problem, idea or suggestion, we are here to help and give advice.
- 2 **Develop your hidden talents.** EMBL has clubs ranging from acting, choir singing, juggling, and alpine adventuring – moreover, if you have a great idea for a new club, contact the Staff Association about how you can get it started.
- 3 **Let us know what you're thinking.** Staff members are best placed to inform and develop the knowledge base of issues that matter most to them. We represent your views so make sure we know them.
- 4 **Come to the general assemblies.** The more people that come up with ideas and input, the better. Meetings take place annually at each EMBL site, and all are encouraged to attend.
- 5 **Get involved.** Elections for Staff Association posts take place annually in the spring. Staff take part voluntarily, but work is rewarding and develops many valuable skills. Training is available to all Staff Association representatives.
- 6 **Network.** Take advantage of social opportunities throughout the year to expand your personal network and meet others in the EMBL community.
- 7 **Keep up to date** by visiting the Staff Association website, which includes comprehensive information on contacts, services, clubs, and upcoming events and elections. The site will be relaunched early in 2013 to enhance the information and feedback possibilities for all EMBL sites.
- 8 **For more information, get in touch:** staff@embl.de.

bookreview

The Book of Barely Imagined Beings: A 21st Century Bestiary, Caspar Henderson

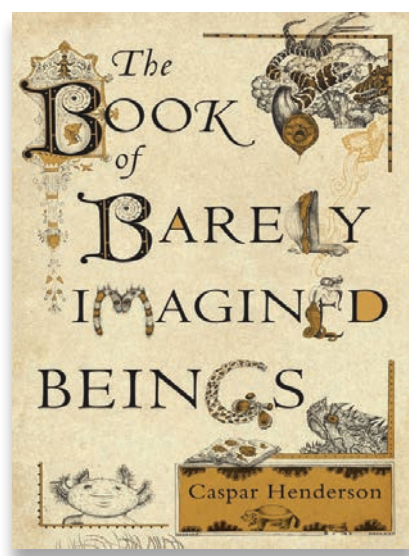
Daniel Bucher reviews an unconventional encyclopedia of life

Henderson takes an alphabetical approach towards cataloging biodiversity and highlights some of the most unconventional members of the Eumetazoa. Each chapter provides a background and synopsis of the featured organism with a level of detail that is both approachable (yet entertaining) for biologists and non-scientists alike.

Highlights include Venus's Girdle, a ctenophore (or comb jelly) which resembles a shimmering ribbon that navigates the ocean's depths; *Gonodactylus smithii*, a stomapod (also known as the mantis shrimp), which has some of the most ostentatious (and spectrally sensitive) eyes on the planet; and *Iridogorgia pourtalesii*, a gorgonian (or sea fan) from the Cnidaria who's "elegant corkscrew spine with regularly placed feathery branches make it seem more like something from a mathematical theorem than part of the animal kingdom."

Henderson's prose sometimes deviates substantially from the prevailing theme, however each detour adds to the book's overall aesthetic. His unconventional style of writing is recapitulated by running commentaries in the margins that highlight recent advances or long-standing controversies in a wide variety of scientific disciplines.

To cater to readers of different backgrounds, Henderson includes concise appendices on the fundamentals of biological classification and a summary of our planet's different eons, eras, periods and epochs (which serves as a sobering reminder of just how brief the Holocene epoch has been). This '21st Century Bestiary' is ideal for anyone who has a burgeoning interest in natural history or is simply awed by the variety of forms that nature has so eloquently concocted through millions of years of evolution and natural selection.



⇒ Published in the UK by Granta in October 2012; to be published in the US by Chicago University Press in April 2013.



Steve Gamblin (UK Medical Research Council) receives the Feldberg Foundation Prize from EMBL's Christoph Müller ahead of his prize lecture at EMBL Heidelberg in November



Children from EMBL Heidelberg's Kinderhaus enjoy this year's lantern parade

Courtesy of Diana Zach



Argentina's Science Minister Lino Barañao and EMBL Director General Iain Mattaj sign an MoU to enhance cooperation (see page 9)



A news crew interviews engineer Philippe Mas at EMBL Grenoble, following research published by Stephen Cusack's group



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Let it snow! Powder covers EMBL Heidelberg for much of the first half of December, much to the delight of our Facebook fans



Pinto Paixão, Director of the Faculty of Sciences at the University of Lisbon, Portugal, visits EMBL Heidelberg in November

newsinbrief

- ⇒ Registration is now open for the following EMBL-EBI hands-on bioinformatics training courses: Multiple Sequence Alignment and Analysis with Jalview - Tutorial and Hackathon, 21–22 January (register by: 7 January); EMBO Practical Course on Metabolomics Bioinformatics for Life Scientists, 25 February–1 March (register by 2 January). www.ebi.ac.uk/training/hands-on
- ⇒ On 23 November EMBL Director General Iain Mattaj visited Greece to meet with Vasilis Maglaris, Secretary General for Research and Technology, in Greece. During the visit Iain, together with EMBL Heidelberg group leader Nassos Typas, took part in a mini-symposium organised by national Council delegate Babis Savakis, that took place in the National Hellenic Research Foundation. The event aimed to offer a platform for the discussion

of ideas and opportunities for boosting research and collaborations. It featured talks from Babis, Iain, Nassos, EMBL alumna Anastasia Politou, and George Kollias of the Alexander Fleming Biomedical Sciences Research Center.

- ⇒ In late November, Tom Hancocks, Bert Overduin, Marc Rosello and Emma Hastings brought EMBL-EBI's training roadshow to the Faroe Islands to introduce the EBI's resources and services. Delegates from across the life sciences – including medical scientists and clinicians, biobank researchers, microbiologists, and researchers from aqua-culture – gathered to find out more about Ensembl, the ENA, Array Express and the Gene Expression Atlas.
- ⇒ It has been a particularly busy autumn for courses at EMBL Hamburg, with the sixth EMBO Practical Course on Solution Scattering from Biological

Macromolecules taking place 17–24 October and first joint EMBL|CCP4 training course – the European School for Macromolecular Crystallography (ESMAX) – from 19–26 November. “It's important to us that everyone feels welcome here at EMBL Hamburg and we take a lot of time to make sure that each course is a special event for all the participants,” says Margret Fischer, head of Administration at EMBL Hamburg.

- ⇒ On 20 November EMBL-EBI opened its doors to 36 early-career life scientists and bioinformaticians who came to find out about the EBI's career opportunities, research and services. Highlights included a genomics research talk from new group leader Oliver Stegle. Visitors also had the opportunity to take part in usability testing of the EBI website. The next Open Day will take place 14 March 2013. www.ebi.ac.uk/training/penday

events@EMBL

22 January EMBL Heidelberg

Science and Society Forum lecture:

Quality control in the communication of science: Is peer review up to it?

Irene Hames, independent editorial consultant, UK

15 February EMBL Monterotondo

Distinguished Visitor Lecture: Using switchable mouse genetics to identify best targets for cancer therapy, Gerard Evan, University of Cambridge, UK

2 February EMBL Heidelberg

Burns Night

21 February EMBL Heidelberg

Heidelberg Forum on the Biosciences and Society:

Epigenetics: Reality and biomedical potential, Susan M Gasser, Friedrich Miescher Institute for Biomedical Research, Switzerland

25 February–5 March EMBL-EBI

EMBO practical course: Metabolomics bioinformatics for life scientists

26–28 February EMBL Heidelberg

EMBL advanced course: Development of transgenic animal models using zinc-finger nucleases

3–8 March EMBL Heidelberg

EMBO practical course: High-throughput RNAi and data analysis

11 March–16 March EMBL Hamburg

Workshop: IDPbyNMR ITC on SAXS and computational techniques

14 March EMBL-EBI

EMBL-EBI Open Day

18 March EMBL Heidelberg

Science and Society Forum lecture:

The Earth Microbiome Project: A new paradigm in geospatial and temporal studies of microbial ecology, Jack A Gilbert, Argonne National Laboratory, USA

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

people@EMBL



Nancy Podevin has joined EMBL Heidelberg as a scientific strategy officer, supporting EMBL's Director General and International Relations department. Nancy previously worked as a scientific and communications officer at the European Food Safety Authority in Parma and gained a doctorate in plant systems biology at Ghent University, and a postdoc at the University of Leuven. Her interests include travelling and hiking.



Two of EMBL's longest serving employees retired in November.

Marie-Thérèse Dauvergne joined EMBL Heidelberg in 1976 as a biochemical technician. Marie-Thérèse, who moved to the Grenoble outstation in 1980 and worked in the Leberman group and ILL-EMBL Deuterium laboratory, is well known for her sharp mind and kindness.

François Dauvergne joined EMBL Grenoble in 1976, and two years later was posted to EMBL Heidelberg where he became the right-hand man of Andre Gabriel, with whom he developed state-of-the-art X-ray detectors. He later returned to Grenoble, where he worked in the neutron crystallography group and made significant contributions to diffraction instrumentation. François is appreciated by all for his outgoing personality and generosity. We wish both a happy retirement.



awards&honours

The right chemistry

EMBL Heidelberg senior scientist Carsten Schultz is the co-recipient of this year's Heidelberg Molecular Life Sciences (HMLS) prize, together with Heidelberg University's Michael Brunner. The 200 000 Euro award recognises the scientific achievements of the researchers and the influence that their groups have had in transforming Heidelberg into a centre for chemical biology.

The Schultz group focuses on developing chemical techniques to investigate areas such as intracellular networks that control a large number of physiological processes in animals, including humans.

The lab also applies these tools to study health questions, for instance through the development of sensor molecules to identify the development of lung emphysema in cystic fibrosis patients. "The award reflects



Carsten Schultz, HMLS coordinator Frauke Melchior, and Michael Brunner

the efforts of people working in my group during the past decade. In addition, it recognises the growth of chemical biology as an important and highly interdisciplinary research field – and the community in Heidelberg is now reaching a critical mass," says Carsten.

First prize for structured thinking

Eva Kowalinski, a doctoral graduate from the Cusack group at EMBL Grenoble, was awarded first in the 2012 Prize of the Chemistry and Biology Department of the Université Joseph-Fourier (Prix de l'UFR de Chimie et de Biologie de l'UJF), in Grenoble. Every year the award highlights the best two articles published in Biology and in Chemistry by researchers in the department. Eva's article was published in *Cell* in October 2011 and describes the structure of the RIG-I receptor, both alone and linked to viral RNA, thus explaining how the receptor can trigger the innate immune response.

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