

EMBL etcetera

Issue 73 • February 2013 • www.embl.org/newsletter



Home from home

Basic needs, rehabilitation, education and healthcare – four objectives of the Afoyo House orphanage, a project that Budget Office assistant Michelle Oduor presides over in her spare time.

Michelle spent the Christmas break coordinating support for supplies and refurbishments for the orphanage, a home she founded in her grandmother's house three years ago. While the project is small-scale, she hopes that one day it could become self-sustaining and have an impact on even more lives.

See page 11

Test-tube data

EMBL-EBI researchers develop a reliable and scalable method for using synthetic DNA to store data



Sonnets, speeches and more encoded in a tiny speck of DNA, page 4

Czech in

The Czech Republic formally requests to become EMBL member state

EMBL has welcomed the application of the Czech Republic to join as the lab's 21st full member state – the proposal will be endorsed at this summer's Council Meeting, while an official decision will need to be taken by the Czech national parliament and then ratified. In recent years, EMBL has forged strong scientific links with the Czech molecular life science community, and membership status will facilitate and enhance new and established research connections.

Find out more on page 2

7 | Fresh thinking on model organisms



2 |

ELIXIR appoints founding director

9 |

EMBL exports to Israel

13 |

Top tips on communicating your science



Early Czech scientific and technological mastery in Prague's world-famous astronomical clock

Time right for Czech membership

The Czech Republic's Minister for Education, Petr Fiala, has written to EMBL formally requesting that the country joins the lab's family of member states. The Czech Government and EMBL have welcomed the move, with the proposal to be endorsed at this summer's Council Meeting.

In the past few years EMBL has established close links with Czech research organisations. A range of initiatives have looked to stimulate connections, including joint workshops and a Memorandum of Understanding to promote scientific exchange with the Central European Institute of Technology (CEITEC) based in Brno. Additionally, the lab is developing cooperation with Biocev – a joint project of the Academy of Sciences of the Czech Republic and Charles University in Prague to establish a European centre of excellence in biomedicine and biotechnology. There have been several visits from EMBL group leaders and Core Facility staff to Czech institutions, as well as return visits by Czech scientists to EMBL.

"I'm truly pleased that such a decision has been made," Minister Fiala wrote in the letter, dated 23 January. "I can assure you the entire Czech molecular biology community perceives it as a great step forward."

"The entire Czech molecular biology community perceives it as a great step forward"
– Petr Fiala

"Molecular biology in the Czech Republic is developing at a tremendous pace," says EMBL Director General Iain Mattaj. "EMBL will benefit, without doubt, from the unique skills and expertise that Czech membership will bring to the laboratory – it will also facilitate and strengthen exciting scientific links, as we already see from the great examples already established."

Membership of EMBL would make the Czech Republic the lab's 21st full member state, following a successful ratification process in their national parliament (Australia is an associate member state).

New ELIXIR director, Niklas Blomberg

In early February the Interim ELIXIR Board announced the appointment of Niklas Blomberg as ELIXIR Director.

Niklas will take up the newly-created position on 1 May, joining from Astra-Zeneca R&D Mölndal, Sweden, where he works as a principle scientist and team leader in computational biology and chemistry. He has also been an industry advisor in national eScience initiatives and an active participant in cross-industry research programmes; he undertook his PhD at EMBL.

The pan-European research infrastructure to share life science data officially entered its implementation stage in January, following the first meeting of the ELIXIR Scientific Advisory Board (SAB), chaired by Robert Gentleman of biotech company Genentech. The SAB has drafted a series of recommendations for each ELIXIR Node application, and in April, the ELIXIR Interim Board will make its final recommendation. Nodes will officially come into effect once the ELIXIR Consortium Agreement is signed.

The number of countries demonstrating commitment to the project also continues to grow, with Greece becoming the 15th nation to sign a Memorandum of Understanding.



EMBL heads east, to Turkey and Israel

EMBL went east this winter – not to escape the heavy seasonal snowfalls, but to strengthen scientific links in Turkey and Israel.

On a five-day visit to Israel, from 3-7 December, EMBL DG Iain Mattaj and Director of International Relations Silke Schumacher met with high-level representatives, including Minister for Science Daniel Herschkowitz and scientists from some of the country's top research institutes. Iain and Silke took part in a diverse programme of discussions, seminars

and visits to institutions around the country.

On 16 January, Iain, together with other representatives from EMBL and EMBO, visited the headquarters of the Scientific and Technological Research Council of Turkey (TÜBİTAK) to take part in an 'information day', with the goal of furthering links between the organisations. The meeting included talks from representatives of EMBL, EMBO, TÜBİTAK and some of Turkey's leading universities.



Open call for nodes

Euro-BioImaging has opened its first call for nodes, inviting leading European imaging facilities to join in building an open access research infrastructure for biological and medical imaging technologies. The infrastructure project, jointly coordinated by EMBL Heidelberg and EIBIR Vienna, will significantly strengthen the European imaging landscape in the life sciences, comprising a set of geographically distributed but strongly interlinked facilities (Euro-BioImaging Nodes), which will provide training, service and open access for European researchers. The call is open until 30 April: www.eurobioimaging.eu.

The right advice

EMBL Heidelberg welcomed Anne Glover, Chief Scientific Advisor to the European Commission, in a visit to the lab on 9 January. Greeted by EMBL Director General Iain Mattaj and Director of International Relations Silke Schumacher, she met scientists working in a broad range of subject areas and at many different career levels, including EMBL group leaders Jan Korbel and John Briggs, representatives from EMBO and pre- and postdocs.

Glover, who is a molecular biologist by training, also gave insight into the challenges of providing scientific advice at the European level, where she engages in areas such as policy proposals, interpreting scientific evidence, strategic planning for emergencies, and updating policy makers on the latest scientific advances and novel technology developments.

Following a full day at the lab, she went away clearly fascinated by what she had seen, writing on Twitter: "Very impressed by the atmosphere, ethos and young scientists at EMBL in Heidelberg. It is molecular biology at its very best."



From left: Silke Schumacher, Iain Mattaj, Anne Glover, Maria Leptin (EMBO) and Didier Schmidt (EC)

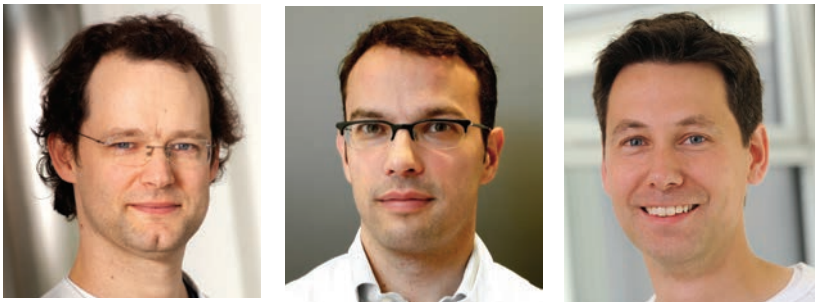
"We need more people like Anne Glover who have a real knowledge of the challenges scientists face, but are also able to communicate key messages to politicians. The Chief Scientific Advisor was interested in how we communicate, to whom, and also wider issues affecting researchers, such as mobility and maternity"

– Jenny Hansson, postdoc,
Krijgsveld team

"Meeting someone involved at the political level provides important insights into how decisions are made and could even inspire some to pursue careers in science policy. It was fascinating to speak to Anne Glover about real challenges and opportunities we face as scientists – from our research projects to our next career steps"

– Gary Male, predoc,
Müller group

Top clinicians join as MMPU fellows



Joachim Kunz, Lorenz Lehmann and Stephan Singer: new MMPU fellows

Three top-level clinician scientists have been awarded career development fellowships within the framework of the Molecular Medicine Partnership Unit (MMPU), and will work to forge innovative and collaborative research with groups at EMBL.

The two-year fellowships, funded through the second round of the German Excellence Initiative – which heralded the creation of the Heidelberg Research Centre for Molecular Medicine – sees Joachim Kunz, Lorenz Lehmann and Stephan Singer work with groups not yet members of the MMPU (Beck, Furlong, and Korbel), intensifying and broadening interactions between scientists at EMBL and the Medical Faculty of the University of Heidelberg.

The fellows, who will all have taken up their new positions by 1 April, will focus on research in areas such as leukemia, cancer

signalling and heart disease. They will have access to EMBL's infrastructure and skill base, and bring with them significant knowledge in translational medicine.

"We are delighted to have been able to offer these exciting fellowships to three exceptional clinician scientists, who will doubtless further strengthen links between molecular research and medicine," says EMBL Associate Director Matthias Hentze, who co-heads the MMPU with the University of Heidelberg's Andreas Kulozik. "This is an exciting time for molecular medicine in Heidelberg and is further good news on top of a proposal for a Centre for Integrative Molecular Biology and Medicine called Bio-Square, based in Neuenheimer Feld, which would provide a core nucleus for collaborative research between EMBL and other major life science institutes in the city"

Open minds

EMBL Heidelberg will open its doors to the world on Saturday, 27 April, with an estimated 2000 visitors, from the Heidelberg area and beyond, expected to attend the *Tag der offenen Tür* (that's an Open Day to you and me). Staff will deliver a programme of lectures, exhibitions, hands-on experiments, a science café and tours.

EMBL's Office of Information and Public Affairs is responsible for organising and delivering an engaging and enjoyable day, and will rely on the support and help of staff to make it a successful event for EMBL and its visitors. More information will be available on the website soon.



DNA: The future of data storage?

Like many of the best ideas, it came from a chat in the pub after work. When EMBL-EBI's Ewan Birney and Nick Goldman were sketching out thoughts on how to tackle challenges relating to the flood of genetic information that the EBI is now receiving, they playfully turned their minds to DNA. Looking down at their ink-covered napkins, they realised that, at least in principle, combining different technologies could in fact lead to something quite valuable.

They turned their idea – which involves a technique using an error-correcting code to store and retrieve data in synthetic DNA molecules – into reality, successfully storing 739 kilobytes of data. This included all 154 of Shakespeare's sonnets, a scientific paper, a colour photo of EMBL-EBI, an excerpt from Martin Luther King Jr's 'I Have a Dream' speech, and a software algorithm.

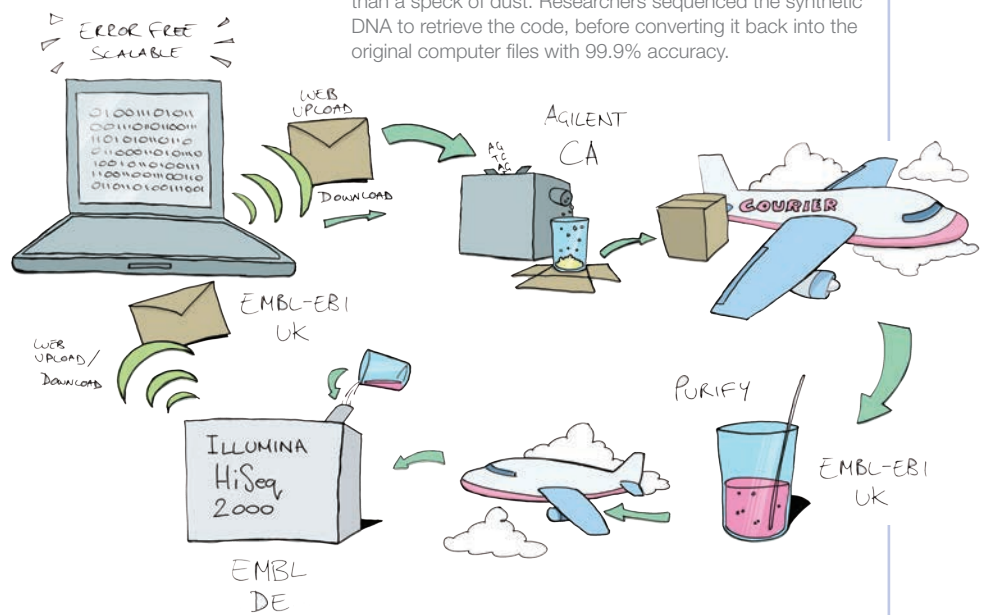
This is not the first time DNA has been used to store data, but the amount sequenced is a new record and in theory the technique raises the possibility of far more. Moreover, it reduces the copying errors affecting previous DNA storage attempts.

The team's paper, published in *Nature* in January, captured the imagination of the world's media: more than 300 print and online articles covered the story – including major print publications such as *The Economist*, *Guardian* and *Telegraph* – resulting in a 70% increase in the peak search volume for the term 'DNA storage' on Google. It was reported in more than 10 European countries and many beyond: Australia, China, India, Japan, Korea, New Zealand, Russia, the United Arab Emirates and USA.



China Central Television crew at EMBL-EBI

Incredible journey: Sonnets, speeches, papers and pictures were translated from binary into a form of DNA code. This code was converted into synthetic strings of DNA no bigger than a speck of dust. Researchers sequenced the synthetic DNA to retrieve the code, before converting it back into the original computer files with 99.9% accuracy.



'We could store all the digital information in the world and much more'

Why use DNA for data storage?

DNA is astonishingly stable, so unlike video cassettes or modern hard drives, it will last for thousands of years under conditions that are simple, inexpensive and require little energy to maintain. It also holds a vast amount of information in a tiny amount of material. As we know a lot about efficient ways to copy DNA, it might be possible to copy a whole archive efficiently using molecular biology techniques – imagine being able to share all the knowledge of major libraries just by carrying out a simple chemical reaction and mailing off the result in a test-tube.

When might it become available?

At first it will only be economically viable for records that have to be kept safe for hundreds or even thousands of years: national or global historical records, or perhaps information about nuclear waste dumps. As costs come down, if the technology is developed, the timescales will reduce. We estimate that in 10 years from now, DNA storage might be useful for information that's needed in 50 years' time – like keeping your wedding videos safe for your future grandchildren to see.

How much might be stored?

We could use the same coding scheme, without modifications, to store all the digital information in the world: 3 zettabytes (3000 billion



Nick Goldman reflects on the potential of test-tube data

billion bytes). And the same scheme could encode far more information than that – billions of times more. At the moment this would be prohibitively expensive, but at least our coding scheme shows that it's possible. The experiment we did converted about three-quarters of a megabyte of information from a hard drive into DNA – we also showed how that might scale up, at least theoretically, but we could not do the scale-up experiments.

What's next?

We want to improve the coding and decoding to see if we can get more information into the same amount of DNA. We also want to see if we can automate and miniaturise the process – for this to work effectively, it is necessary to bring existing technologies together, with DNA synthesis, storage and reading back in one place. Microfluidics, for instance, could do what is currently lab science, and the process could be further automated using robotics.

Keeping it in proportion

As an embryo develops, it needs to build organs, such as its limbs and skeleton that are in proportion in comparison to the overall size of the embryo, otherwise, well, things would go seriously wrong. Yet understanding the mechanisms that ensure organs are made at the appropriate size during development has long been a puzzle for researchers.

The Aulehla group at EMBL Heidelberg has taken a step towards answering this question, identifying a genetic pattern that appears to be crucial in ensuring that embryos grow up to become well-proportioned animals. In the study, published in *Nature* in January, they found that the size of the future vertebrae in a mammalian embryo is influenced by a wave-like gene expression pattern – and they filmed it happening under the microscope.

The group found that neighbouring cells in the developing vertebral column of a mouse embryo coordinate to turn specific genes on and off in turn, creating a pattern much like the 'slide to unlock' animation on a smartphone. Using a new technique the group focused on a tiny, one-cell thick layer of vertebral column precursor cells and painstakingly recreated its natural conditions to form future vertebrae in a petri dish. Then, using markers,



Catching the wave: postdocs Charisios Tsiaris and Volker Lauschke, with Alexander Aulehla

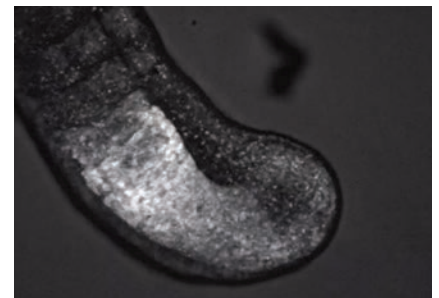
they observed that the speed of the wave precisely matched the subsequent size of these segments – the faster the wave, the bigger the future vertebrae will be.

“Each segment is smaller and the expression waves are proportionally slower,”
– Alexander Aulehla

“We found there is a clear link: when the embryo is smaller, the number of segments formed remains the same, but each segment is smaller and the expression waves are proportionally slower,” says Alexander Aulehla.

The researchers hope that the new technique could also lead to insights into the fundamen-

tal question of exactly how the speed of the waves is controlled at the molecular level and how genetic oscillators are used to encode information for embryo development.



View the video: www.embl.de/research/units/dev_biology/aulehla

Research highlights

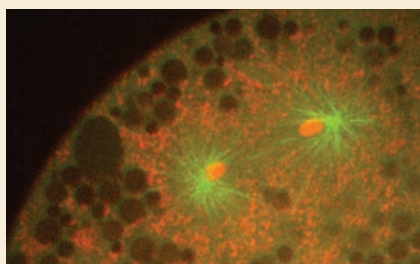
The mutation police

Scientists in the Luscombe group at EMBL-EBI and the MRC Laboratory of Molecular Biology have discovered how our genome keeps the effects of mutations in check. The discovery, published in *Cell* in January, could help in the study of disease and understanding the evolution of the human genome.



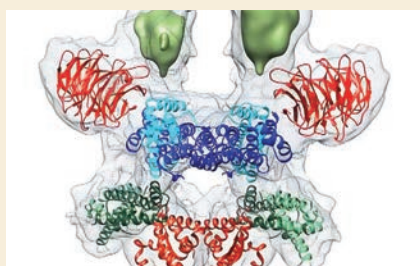
Insights into cell division

EMBL Heidelberg's Ivo Tellez led a team that developed a new technique to remove cellular 'innards' from a fruit fly embryo at a stage when it is essentially a sac full of membrane-less 'cells' that divide without building physical barriers. Published in *Nature Protocols* in January, watch the video at youtu.be/7krCUBuHvpw



Get the message

Scientists in the Berger and Schaffitzel groups at EMBL Grenoble, together with researchers from IGBMC in Strasbourg described the architecture of the central scaffold of TFIID, the human protein complex essential for transcription from DNA to mRNA in *Nature* in January. youtu.be/DZ9X4gLzCM



Back to square one

Once its fate has been decided, a stem cell immediately sets about differentiating to fulfill its destiny. Rewinding its actions from fully differentiated cell back to pluripotent stem cell – called 'induced pluripotency' – is difficult. Until now, research has generally focused on investigating genes involved in reversing differentiation. However, a team of researchers from EMBL Heidelberg decided to take a novel approach: to look for changes in protein levels instead of genes.

The Krijgsveld team collaborated with members from Harvard Medical School and the Harvard Stem Cell Institute to investigate protein changes when turning fibroblasts (cells of connective tissue) back into stem cells. Published in December in *Cell Reports*, they discovered that protein levels did in fact change over the course of the cell's 'rewinding'.

“We saw some changes that there was no hint of when people looked at gene expression,” explains Jenny Hansson, a postdoc at EMBL who led the research.

Having steamed ahead and already pinpointed a protein crucial to differentiation (and hence its reversal), their findings will now act as a stepping-stone for researchers to start investigating other protein changes during cell reprogramming in more depth.

Learn from the linker

Study led by the Wilmanns group at EMBL Hamburg sheds light on crucial mechanisms of cellular reprogramming

The structure of Oct4, a transcription factor essential in transforming mature cells back into pluripotent stem cells, has been resolved by scientists at EMBL Hamburg and the Max Planck Institute for Molecular Biomedicine in Münster. This new insight could lead to improvements in cellular reprogramming, and potentially new applications.

Nobel Prize-winning research by Shinya Yamanaka showed that a combination of four transcription factors – Sox2, Klf4, c-Myc and Oct4 – controls the genes involved in reprogramming mature cells to become pluripotent again. However, subsequent studies have indicated that only Oct4 is irreplaceable, whereas the other three transcription factors can potentially be replaced by other members of their respective molecular families. Scientists want to know why this is so.

Published in *Nature Cell Biology* in February, the study reveals the structural details of Oct4, shedding light on how it interacts with its target genes. The analysis focuses on a previously unexplored linker sequence between two DNA binding elements of the protein. The researchers believe that the linker is key in recruiting other protein components



Revealed: the structural details of Oct4

that are essential for Oct4's reprogramming action. In fact, the study shows that modifications to the sequence of the linker could lead to the loss of Oct4's ability to reprogramme cells, and can strongly affect the recruitment of key reprogramming partners.

"The uniqueness of the linker has caught our attention for more than a decade and, thus, we are extremely pleased to see it for the first time, helping us rationalise its function in reprogramming cells to pluripotency," says EMBL Hamburg's Matthias Wilmanns.

Ongoing research will help draw a more detailed picture of how Oct4 acts in the context of other protein components in stem cell pluripotency.

The (re)awakening

Think of a model organism: yeast, nematodes, and fruit flies might spring to mind. But could their water-based ancestral cousins also have something to offer? Members of EMBL Heidelberg's Arendt group certainly think so.

Predoc Oleg Simakov spearheaded a global collaborative project to study three marine species whose genomic features had not yet been characterised: worms, leeches and limpets. By investigating and comparing their genomic information with other marine animals, the team was able to identify features that could indicate their place on the evolutionary tree. "Between different species, evolution speeds can vary. We went very specific here and identified which features of the genome were slow evolving and which were fast evolving," explains Oleg.

The research could lead to new avenues in the study of biodiversity, development and evolution. The group aims to sequence other marine organisms, as many more remain in the dark (some quite literally), with the aim of shedding light on why some features are heavily conserved in some species and not in others.

ChEBI century

ChEBI, the database of chemical entities with a biological interest, celebrated its 100th release in February. Since 2004, the database has provided functionalities, such as detailed information on their structures and biological source.

ChEBI is the only chemical ontology in the world, attracting nearly half a million web visits last year and more than 23 million hits on its web services, which provide programmatic access to the ChEBI database. Recently, there has been a focus on increasing the amount of natural products available, and last year a fully interactive graphical visualisation of the information organised by the ontology was introduced. "After nine years, and 100 releases, ChEBI is now an indispensable tool for modelling in molecular biology," says EMBL-EBI's Christoph Steinbeck.



Prestigious grant-funded projects



Studying the nuclear pore complex to understand cell fate

EMBL Heidelberg group leader Martin Beck has been awarded an ERC Starting Grant to study how the structure of nuclear pore complex adjusts across different cell types – important for understanding cell fate decision. Beginning in February, the group will combine mass spectrometry with electron microscopy to study how active transport between the nucleus and cytoplasm is fine-tuned towards context-specific needs in healthy and diseased tissues.



Two facets of viral RNA

EMBL Grenoble's Stephen Cusack has been awarded an ERC Advanced Grant to study two conflicting molecular mechanisms: the transcription and replication of RNA by influenza-like viruses and their detection by the innate immune system – which could prompt powerful countermeasures. Beginning in May 2013, the 2.3 million Euro project also seeks to identify the host factors bound to viral RNA in influenza-infected cells.



How do embryos develop robustly in the midst of a huge amount of sequence variation between individuals?

EMBL Heidelberg's Eileen Furlong has been awarded an ERC Advanced Grant to study just this, using new population genetic resources in *Drosophila*. The five-year project aims to understand how embryonic development can tolerate changes in gene expression, focusing on the fundamental principles of transcription and how gene regulatory networks control development.



The polychaete worm *Capitella teleta* vary in length from millimetres to centimetres. Like other organisms in the study, they are genetically interesting because some features have barely evolved since Precambrian times (more than 500 million years ago). For instance, the way it moves around – called peristalsis – is like an earthworm, while other features are more unique.

The owl limpet *Lottia gigantea*, a type of sea snail most abundant in California, can live for up to 20 years. Researchers found that the cluster of Hox genes that defines what becomes the front and back end of an animal is present in some form in all animals: it is similar between the owl limpet and the polychaete worm, but is completely different in the leech.

The freshwater leech *Helobdella robusta* has a sucker at each end, it releases an anaesthetic as it feeds to avoid detection by the host animal. The genes that help leeches ‘smell’ blood is one example of very specific evolution, highlighting how complex the evolutionary process can be when it affects different features in different ways.

Core connections

Researchers working at EMBL’s Electron Microscopy Core Facility (EMCF) have developed a correlative microscopy method that has given insights into the molecular architecture of the replication machinery of the Hepatitis C virus, a single-strand RNA virus that affects around 170 million people worldwide and is a major cause of chronic liver disease.

“It has been amazing to have access to such advanced equipment”
– Inés Romero-Brey

In a study led by Inés Romero-Brey, a postdoc in the Bartenschlager group at the University of Heidelberg, scientists found that the virus manipulates the cell membrane to create a complex double-layered mesh of ‘bubbles’ within the cell, called vesicles. Researchers suspect that this could be the safety capsule that the virus builds in order to replicate itself, well insulated from the cell’s safeguarding functions.

Combining fluorescence microscopy to identify the location of viral proteins, and then electron microscopy to zoom in on the



Left to right: Inés Romero-Brey, Uta Haselman-Weiss (EMBL), Ralf Bartenschlager (University of Heidelberg) and Rachel Mellwig

fine structural details, the researchers revealed that, in an infected cell, the extent of the double-layered mesh corresponds with the amount of RNA synthesised in the cell, indicating a strong connection between the size of the mesh and the proliferation of the virus.

Published in *PLoS Pathogens* in December, the study is the culmination of five years of exciting research and developments in areas such as cell culture, handling and imaging technologies, combining a wealth of expertise from EMBL and the universities of

Heidelberg and Ulm. “It has been amazing to have access to such advanced equipment in the study and researchers working on the project have learned a lot from one another,” says Inés.

“The technique adds to the tool box of correlative methods we can use to study cellular structures – it has been a very effective collaboration,” adds Rachel Mellwig, EMCF operations manager. The researchers now aim to look more closely at the role of the double-layered mesh in the progression of the disease.

Search Search

[How to search](#)

About 2314 results

Filter your results

1 2 3 4 5 6 7 8 9 10 Next

EMBL Time

- 1975 - 1979 (87)
- 1980 - 1984 (200)
- 1985 - 1989 (363)
- 1990 - 1994 (536)
- 1995 - 1999 (754)
- 2000 - 2004 (861)
- 2005 - 2009 (897)
- 2010 - 2014 (443)

Country

Group

Unit

Nationality

Did you find who you were looking for?

Whether you're looking for an old friend, an expert in a particular field, a contact for a specific institute, or like-minded people in your city, a visit to the EMBL Members' Directory is the perfect place to start.

The Directory contains all EMBL alumni who have, at one point or another, joined the EMBL Alumni Association, and allowed their information to be displayed. Currently, the number is almost 2500 members – the aim is to increase this in the near future to 65% of EMBL's 6000 alumni.

The Directory allows you to search alumni by first name, surname, city, institute, country, nationality and research interest, as well as EMBL group, unit and period, enabling you to filter your results. Furthermore, you can click on the

name of an alumnus/a to visit their homepage directly from the EMBL page (providing they have added a URL in their profile).

EMBL staff can access the Members' Directory on the intranet, while alumni can access it with their membership login details at www.embl.org/alumni/membersdirectory. If you are not sure of your membership status, or have forgotten your login details, please contact the Alumni Relations Office, who will simplify the process for you.

As an EMBL alumnus/a, you can add yourself to the Members' Directory (and thereby the EMBL website) by joining the EMBL Alumni Association: www.embl.org/alumni/register. The Alumni Office looks forward to helping you get logged on and looking!

Vote Treasurer

It's time to thank and say goodbye to the current EMBL Alumni Association (EAA) Treasurer, Oscar Martin-Almendral, after five years' service.

Most will remember Oscar for his compassion, integrity and dedication to his work at the General Service and Budget Office between 1995 and 2005. Three years after leaving EMBL, Oscar agreed to return as EAA Treasurer "to give something back to EMBL," he says. Now, due to increasing responsibilities as Budget Officer to the Kirchhoff Institute for Physics (KIP) in Heidelberg, as well as several ongoing personal projects, Oscar has decided to step down at the end of February 2013.

EMBL and the Alumni Association board are grateful for his support over the past five years, and for helping to find a suitable candidate as successor: alumna Annabel Goulding, who will stand as treasurer for the February online elections.

Annabel joined EMBL as an internal auditor in 2002 and left as the Head of the Pay and Benefits section in human resources in 2011, also serving as interim Head of HR for a year during this time. She says: "I am in-



Outgoing Treasurer, Oscar Martin-Almendral

terested in the work of the EMBL Alumni Association – finance is not a popular discipline for everyone, so this niche gives me an opportunity to make a contribution. I anticipate some interesting discussions about what the Association can do to benefit the alumni community as ambassadors for EMBL, and some challenging questions from the board about the management of its financial affairs."

Now treasurer to the Meridian Society – a charity for the promotion of Chinese culture in the UK – and company secretary to Tangent Films Ltd – specialising in arts and science documentaries – Annabel handles financial transactions, prepares cost bud-



Candidate Treasurer, Annabel Goulding

gets, accounts and annual reports, making her very suitably qualified for this position.

"Keep it simple," Annabel reveals when asked for some housekeeping tips: "Don't complicate your finances, and don't fret about what else you could have done with your EMBL earnings."

⇒ The position of EMBL Alumni Association Treasurer requires the approval of the Alumni Association members. Please help to get Annabel started by endorsing her online between 14 and 28 February 2013: <https://www.surveymonkey.com/s/VoteTreasurer>.

EMBL exports to Israel

In 1976, Talmon Arad joined the EMBL Structural and Computational Biology Unit as a Research Technician for Kevin Leonard, whose task it was to build an electron microscope lab. Talmon had a few years' experience in this field, and was looking forward to what turned out to be an incredible nine-year learning curve. He tells us his story:

"At EMBL I learnt the most sophisticated methods in electron and cryo electron microscopy. I later developed this method at the Weizmann Institute of Science in Israel, where it was unknown at the time. I helped grow the lab, bringing with me

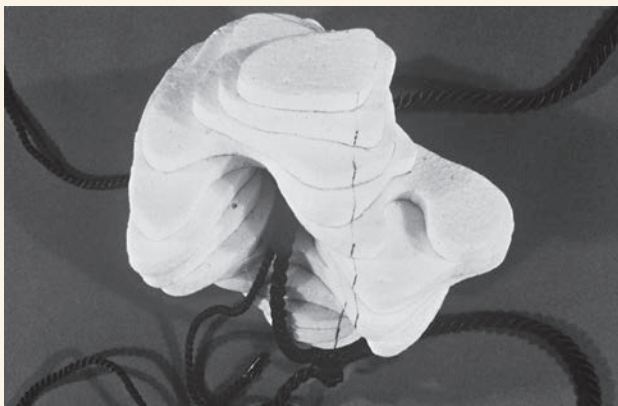
state-of-the-art techniques while ordering more modern microscopes. Here, I also worked with Professor Ada Yonath on the ribosome structure. Together with Kevin Leonard we were proud to take part in the research that led to her Nobel prize.

"I still say that EMBL is 'my' lab, because I was there from the very beginning"
– Talmon Arad

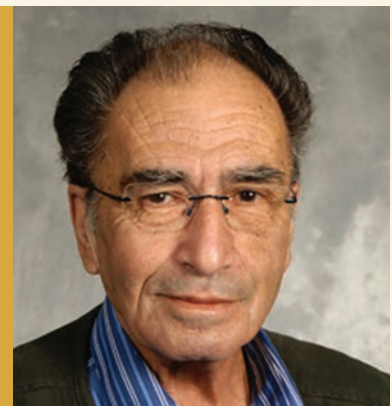
"I have worked on bone structure for many years since then, discovering information otherwise unknown about the bone at a molecular level.

"I still say that EMBL is 'my' laboratory, because I was there from the very beginning. I continued to collaborate with Kevin after I left in 1984, offering a course together on 3D reconstruction, and returning to use EMBL facilities. I now visit Germany annually, which always means a trip to EMBL Heidelberg."

Although officially retired, Talmon still works as a consultant, helping students and researchers in the use of electron microscopes at the Weizmann Institute. There are currently 11 EMBL alumni living in Israel, working at the Weizmann Institute, as well as various universities and hospitals.



Left: 3D model ribosome large subunit, obtained from transmission electron microscope micrographs and 3D computer reconstruction. Research by Ada Yonath, Nobel Prize Laureate in Chemistry, Kevin Leonard and Talmon Arad, 1990–1. Right: Talmon Arad, now retired, was a research technician in the Structural and Computational Biology Unit from 1976 to 1984.



Mark your diaries

14–28 February

www.surveymonkey.com/s/VoteTreasurer

Online election of EAA Treasurer

13/14 June EMBL Heidelberg

21st EAA Board Meeting followed by the John Kendrew Award Ceremony at Lab Day

29 June EMBL Heidelberg

Staff-alumni get-together followed by the Summer Party

23 September Amsterdam

Staff-alumni get-together at The EMBO Meeting

21/22 November EMBL-EBI

22nd EAA board meeting followed by staff-alumni get-together

18–19 July 2014 EMBL Heidelberg

EMBL 40th anniversary reunion

For further details please visit www.embl.org/alumni or contact alumni@embl.org.

From EMBL to Poland, with a little EMBO help

Bartek Wilczynski, former Furlong Group postdoc and one of the 2011 EMBO Installation Grantees, tells *Yvonne Kaul* about his first year as group leader in Poland, at the Institute of Informatics at Warsaw University.

How was the first year back in Poland?

It was overwhelming. Senior colleagues had warned me about the challenges of starting a new lab, but I was astonished by the long list of things to consider: money, space, hiring, supervising, teaching. It's improving though, and we're getting our first results.

What's your research?

It focuses on understanding gene expression regulation by using computational methods. We'd like to find out more about the role of chromatin and the way insulator proteins help define boundaries of regulatory domains in the chromatin.

Are you in touch with other EMBLers, past or present?

Absolutely. I had two papers with Eileen Furlong in 2012, and received an ERA-NET grant from

the European Commission with Andreas Ladurner. I'm also organising a summer school in Poland, which this year includes some EMBL staff and alumni speakers.

Currently there's few alumni here in Poland and the overlap between our research fields is limited. It seems I've more contact with EMBL alumni elsewhere than here – if Poland becomes an EMBL member state one day, there will hopefully be more.

How does it feel to be back home?

It's good to be back and to bring with me what I've learnt elsewhere, and to help students become part of a larger science community rather than a solely Polish one.



Photo courtesy of Tadeusz Pozniak/Polityka

Science policy liaison

When Ioannis Legouras was a child, he built an electrolysis machine in his back yard. So enthralled was he by all the chemical transformations, that he barely noticed his mother panicking about the possibility of him blowing up the house. His passion for science was such: trying new things, and bringing elements of the world together to make science happen. That same inspiration has propelled him forward in his career, where he brings together diverse elements that scientists need to secure research funding.

Not so long ago Ioannis was a predoc at EMBL and became aware he might be on autopilot heading for a long career at the bench. That's when he started thinking about his next career steps. Trying his hand at outreach and working on the lab's Science and Society committee, he found something that he not only enjoyed, but that also came naturally. He embarked on a journey that led from EMBL to a role at the Research Centre for Molecular Medicine (CeMM) in Vienna, working in science communication and providing support to scientists applying for research grants.

"I realised that grants encompass all the elements I am interested in working in – communication, management, and science," Ioannis recalls. "It helped me combine my experience and scientific background with new ideas and goals." The role meant rising to unfamiliar challenges – project management, science writing, communicating with the press. A combination of new expertise



Ioannis currently works as the EU and third party liaison officer at the Max-Delbrück Centre in Berlin

and awareness of the impact his skill-set could have in a broader range of job roles inspired his next move: as EU and third party liaison officer at the Max-Delbrück Centre in Berlin.

"There is a huge range of different opportunities in areas as diverse as policy, law, teaching, and more"
– Ioannis Legouras

"If I do my job, scientists not only get the grant they need, but the necessary support so they can focus their energy on doing research," he says. "I feel I am a crucial part of the process of turning scientific ideas into reality – in the modern research environment, grappling with funding applications is as important as wrestling with experimental problems at the bench."

It is the balance between specificity and diversity that perhaps holds its greatest appeal

for Ioannis. "One minute I will be advising a researcher on how they can get their great ideas across to reviewers in a clear, detailed and simple language, other days I might be preparing workshops and communication materials or engaging with funding teams in Brussels," he explains.

Ioannis advises those considering embarking on an 'alternative' career path to look carefully at the huge range of options, work out what works, and then go for it. "When you change direction, it can feel like you're sinking at the beginning," he says. "You have to be prepared for new elements and embrace them. There is a huge range of different opportunities out there in areas as diverse as policy, law, teaching, business development, and technical services. Talk to as many people as you can and if you like what you hear, you should explore it and make it happen."

– Raeka Aiyar

talkingpoint



A team of scientists from EMBL-EBI and the University of Cambridge travelled to Bangalore and Kolkata in India to deliver a bioinformatics roadshow event exploring next-generation data analysis. John Marioni and Angela Goncalves (EMBL-EBI) together with Ernest Turro (University of Cambridge) worked together with local organisers and more than 60 participants to share expertise in a broad range of areas. The event included lectures, workshops and networking. "The level of enthusiasm was fantastic – participants and organisers learned about data analysis techniques, and we hope that this is the first of many workshops co-organised by EMBL-EBI with our colleagues in India," says John Marioni.

Celebrating partnership

Members of EMBL's Corporate Partnership Programme (CPP) convened at the EMBL Advanced Training Centre for its annual gala event on 26 January, this time focused on personalised medicine.

In an address to participants, Janet Thornton, EMBL-EBI Director, talked about the importance of bioinformatics for the life sciences, pinpointing challenges such as rapid increases in biological data production by the scientific community, and opportunities such as the ELIXIR infrastructure to address this (see page 2). Paul Flicek (EMBL-EBI) gave an overview of studies focused on the genetic causes of rare diseases, and Peer Bork (EMBL Heidelberg) presented research on the human gut microbiome. Earlier, senior EMBL scientists met with representatives of the CPP's founder partners – GE Healthcare, Leica Microsystems, Life Technologies and Olympus – to take part in a lively moderated discussion on personalised medicine.

The programme, now in its fourth year, enables companies to support activities at the Advanced Training Centre, reinforcing EMBL in its mission to provide the



best training to scientists the world over. Speaking at the event, EMBL Director General Iain Mattaj said: "On behalf of EMBL, I would like to express our deep gratitude to our partners – by working together, we are able to deliver an exciting programme of internationally renowned events, and if it were not for the support of the Corporate Partnership Programme, many participants would not be able to attend." Astrid von Soosten, Head of Resource Development at EMBL, adds: "Collaboration on all levels of society is the future of science. We are very pleased that so many distinguished firms are partnering with us."



Top: Iain Mattaj addresses participants
Bottom: Janet Thornton talks bioinformatics

Finding a home

For many, Christmas and charity are inextricably linked, but writing a large cheque is not the only way to help those in need. Take Michelle Oduor, Budget Office assistant at EMBL Heidelberg for instance, who spent her winter break coordinating support for refurbishments and supplies for the Afoyo House orphanage, Kenya – a home she founded in her late grandmother's house three years ago.

"Afoyo House has made a huge difference to the lives of 20 children now living there – many have been welcomed in from abject poverty on the streets," Michelle explains. "But it is a small project – we are a struggling organisation and need people to donate, spread the word, and help the orphanage develop."

Afoyo House is located in Awelo, a small village on the outskirts of Kenya's third-biggest city, Kisumu – one of the most deprived parts of the country. Diseases such as malaria and HIV have afflicted a generation of parents and thousands of children have been forced to fend for themselves.

To get the project up and running, Michelle mobilised the support of friends and family, and set about raising the funds that turned her idea into reality. "There were four main objectives to meet: basic needs, rehabilitation, education, and health care – we have to multi-task and prioritise with the money we raise."



Linking teams of people in Kenya and Europe through charity Humanitarian for Children International, Michelle and her partner Helge Müller have been working tirelessly to maintain and improve Afoyo House – and last year, a small library was installed.

*"The children's time at the orphanage could shape their future"
– Michelle Oduor*

"Each child has their own talents, be it in sports, dancing, music or painting," Michelle says. "They contribute to all aspects of daily life, from basic maintenance to cooking to growing food in the gardens. Many are taking

in very positive experiences during their time at Afoyo House that could shape their future."

She points to the inclusive nature of the project as the bedrock of its success: anyone who feels they have something to offer can get involved – donating money, sponsoring a child, or even visiting the orphanage and helping out. Michelle's hope is that one day the project could become self-sustaining.

"It is proof that you do not need to be super-human to make an impact," Michelle adds. "Just by talking about the project, getting people onboard and trying to change something, we are making a difference to people's lives." To donate or get involved, visit: www.humanitarian4children.wordpress.com.

EMBL: THE EUROPEAN* WORK PLACE FOR FINDING OUT HOW SMALL PARTS IN LIVING THINGS WORK

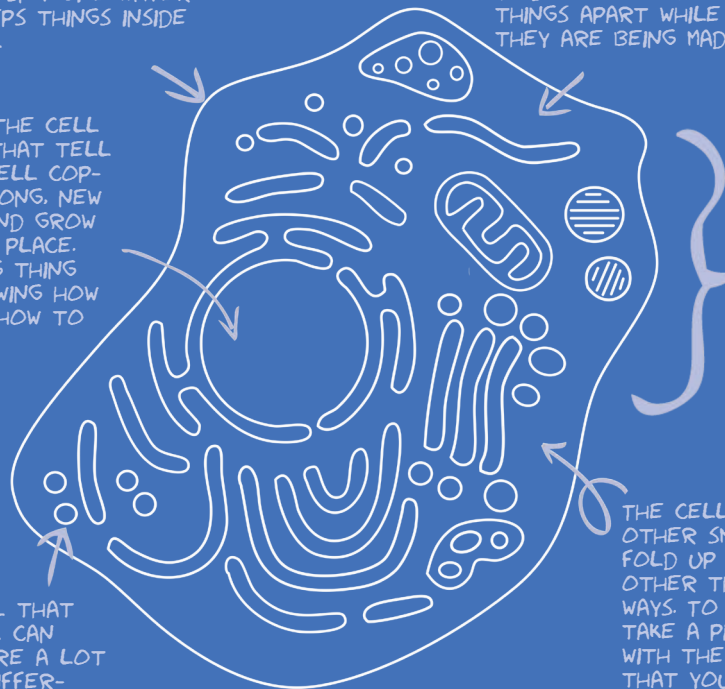
Dermot Harnett, a PhD in the making, describes a cell in the style of a now-infamous cartoon (xkcd.com/1133) using only the 1000 most used words

SKIN ON THE OUTSIDE OF THE CELL MADE OF STUFF THAT DOESN'T LIKE WATER THAT KEEPS THINGS INSIDE THE CELL

SOME CELLS ALSO HAVE SKIN ON THE INSIDE THAT KEEPS THINGS APART WHILE THEY ARE BEING MADE

PART IN THE MIDDLE OF THE CELL THAT HAS LONG THINGS THAT TELL IT WHAT TO DO. IF THE CELL COPIES THE LONG THINGS WRONG, NEW CELLS CAN BE BROKEN AND GROW AT THE WRONG TIME AND PLACE. THIS CAN MAKE THE LIVING THING THE CELL IS IN SICK. KNOWING HOW AND WHY MIGHT TELL US HOW TO STOP THIS

LIVING THINGS START OFF AS A CELL THAT TURNS INTO LOTS MORE CELLS THAT DO THE RIGHT THING AT THE RIGHT PLACE. THIS MAKES ANIMALS AND PLANTS. WE WOULD LIKE TO KNOW HOW. IF WE KNEW HOW EVERY PART OF A CELL WORKS WE COULD MAYBE CHANGE HOW THEY WORK



SMALL PARTS IN THE CELL THAT BURN FOOD SO THE CELL CAN GROW AND LIVE. THERE ARE A LOT OF SMALL PARTS DOING DIFFERENT THINGS, AND LOTS OF CELLS DOING DIFFERENT THINGS TO EACH OTHER. WE USE A LOT OF TOOLS SUCH AS COMPUTERS TO HELP THINK ABOUT THIS

THE CELL DOES THINGS WITH OTHER SMALL PARTS THAT FOLD UP AND STICK TO OTHER THINGS IN DIFFERENT WAYS. TO FIND OUT MORE WE TAKE A PICTURE OF THEM WITH THE KIND OF LIGHT THAT YOU TAKE PICTURES OF BONES WITH

*SORRY, WE DID NOT ONLY USE THE TEN HUNDRED MOST USED WORDS FOR THIS WORD

Retreats promote structured thinking



Speaking science

Communicating your science to the outside world not only raises awareness of your research and gets people talking, it can also boost your career. Members of EMBL's Office for Information and Public Affairs – Lena Raditsch, Sonia Furtado Neves, and Isabelle Kling – give their advice on how to communicate science beyond the lab.



Left to right: Sonia (Press Officer), Isabelle (Project Officer) and Lena (Head of Communications) are on hand to help you successfully communicate your science to peers and the public alike

1 Be enthusiastic. There's a reason you started doing research – remember it, and **share your excitement**, it will get others excited too.

2 Know your audience. There are many different audiences, with many different concerns. **Pitching at the right level** involves taking a step back and thinking about why your research might be important or of interest. Remember that others may not share your background knowledge or your interests – but don't underestimate peoples' intelligence.

3 **Avoid jargon.** If people do not grasp what something means, they stop paying attention. If you must use numbers, compare them with something people can relate to, such as 'enough to fill a swimming pool' – and be sure they are accurate.

4 **Practice.** Speak to friends or family outside the lab.

5 Tell a story about your research. If you can **personalise your message**, simply, concisely, and accurately, it can be a great way of capturing attention.

6 Stay in touch with the communications team. **Let the press office know** if you have an exciting paper in the pipeline. They can help you get your message to the media or other appropriate audiences.

7 **Be aware** of how the press works. Journalists are often working with tight timescales and limited space. If you are not certain of an answer be sure to check and get back to the interviewer.

8 **Get involved.** There are many ways to communicate science to the outside world: writing, tweeting from conferences, lab tours, open days. If you have more time to commit, you could get involved in science fairs, science cafés, museums, start a blog, or give a talk at your old school or university. For more information contact: info@embl.de.

Scientists and engineers from the EMBL Grenoble and Hamburg synchrotron beamline teams met to discuss experiences, common projects and future directions on structural biology methods at their bilateral meeting, 14–16 January.

The event, attended by more than 35 participants, kicked off with a workshop looking at the status and recent developments of the CRIMS (an Information Management System for Crystallisation developed at EMBL) led by Grenoble's José Márquez and Hamburg's Rob Meijers. Participants from both sites presented the latest developments and challenges at the BioSAXS and MX beamlines, as well as talks from the instrumentation groups and sample preparation, characterisation and crystallisation facilities. Another highlight was a tour of the EMBL beamlines at PETRA III.

Collaboration at the two sites has borne several fruits over the years, with some projects already integrating parts of the beamline environments on both sites, such as a single BioSAXS sample environment allowing the automatic processing of hundreds of samples.

"After three years of joint effort it was great to see the MD3 sub-micron Kappa diffractometer fully operational – this new instrument puts EMBL in a leading position to develop new data collection methods like serial data collection of micron-sized crystals," says Grenoble's Florent Cipriani, who co-organised the event with Hamburg's Stefan Fiedler. "The bilateral meetings are always very inspiring and dynamic events. It is a great opportunity to get together and to evaluate the past year's work and to develop new projects for the future," adds Stefan.

ConStruct Heidelberg

A consortium of scientists from leading Heidelberg-based research groups with a strong interest in structural biology and the Karlsruhe Institute of Technology convened for a two-day retreat near Pforzheim in December. The event included scientists from seven EMBL groups and high on the agenda were issues such as collaborations, enhancing the impact of the local research community and possible funding opportunities. "Bringing researchers together from leading structural biology groups has helped develop valuable connections between researchers," says Christoph Müller, Joint-Head of the Structural and Computational Biology Unit at EMBL Heidelberg.

What's your 'overly honest' lab confession?

EMBL PhDs and postdocs reveal the lighter side of scientific methodology, with their own contributions to the Twitter phenomenon #overlyhonestmethods



Raeka Aiyar @EMBL Heidelberg

Samples were centrifuged for as long as it took to run back up the stairs with the liquid nitrogen.

[expand](#)



Madhankumar Anandhakrishnan @EMBL Hamburg

Samples were heated at 75°C. The 95°C thermoblock was too far away from the window and I couldn't watch the snow fall.

[expand](#)



Minda Sehra @EMBL-EBI

Step 1: Open new spreadsheet. Step 2: Plot your data. Step 3: Add error bars. Step 4: Cry.

[expand](#)



Marion Libouban @EMBL Monterotondo

Cells were trypsinised for the time it took for the microwave to reheat my coffee.

[expand](#)



Jason van Rooyen @EMBL Grenoble

X-ray diffraction data were processed to a resolution of 2.0 Å because anything higher would require too much arguing with reviewers.

[expand](#)

bookreview

Dreamland: Adventures in the Strange Science of Sleep, David Randall

Michele Cristovao reviews a book that explores research that is investigating the peculiar world of sleep

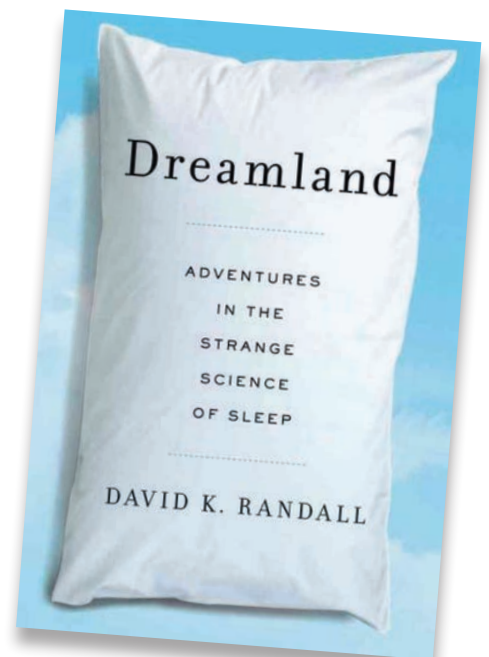
David Randall's *Dreamland* is an eye-opener. It is a compelling description of the importance of sleeping and dreaming in a person's life, and how lack of sleep can severely impair your daily routine. From remembering where you put your car keys, to bringing a passenger plane safely to the ground, *Dreamland* explains that how you spend your time during the night can have a somewhat unexpected influence on your daily performance.

Randall was inspired to write the book after waking up one night, facing the wall he had just walked into, completely disoriented and not knowing how he got there. It turned out he is a sleepwalker, a condition that affects many but is still not well understood. Guided by his desire to understand how he could improve his own sleeping habits, Randall follows the trail of sleeping disorders and of

the people who dedicate their lives to raising awareness of the importance of a good night's sleep. He does an excellent job of making you think about the quality of your sleep, while keeping you engaged with entertaining stories about people he met along the way and how sleep deprivation has affected their lives. The writing style is accessible, while maintaining a level of scientific curiosity that both scientists and non-scientists can appreciate.

"You will look at the time you spend asleep in a completely different light"

After reading about sleeping murderers and how you can beat jet-lag, you will look at the time you spend asleep in a completely different light. Reading *Dreamland* is a must if you want to get a good night's rest.



Published by W W Norton & Company



During a visit to the Genome Campus, George Freeman MP, life sciences advisor to the UK Government, met EMBL-EBI's Janet Thornton



Scientists, communicators and trainers gather in Heidelberg to watch and discuss sessions from the ScienceOnline 2013 conference



St Honoré pastries in celebration of 50 years of Franco-German friendship proved a tasty treat for EMBL's facebook friends



Piping in the Haggis at the annual Burns Night celebrations at EMBL Heidelberg – good food, high spirits and dancing enjoyed by all!



More than 70 staff enjoyed excellent snow and conditions for the annual EMBL Grenoble ski day in the Rhône-Alpes on 8 February



Maia Segura Wang's *Workshop* was one of the winning images in the EMBL Photography club's 'Winter beyond the Cliché' exhibition

newsinbrief

- ⇒ In January new EMBL-EBI predocs spent three days on the 'Primers for Predocs' course, organised by the EMBL-EBI Training Team. They learnt about the different EBI databases, resources and tools available; as well as how to access these via command line and through EBI Web Services. Existing predocs also gave advice on their experiences of starting at the EBI.
- ⇒ EMBL-EBI visited San Diego, California in January to raise awareness of its training, research and tools among plant and animal genome researchers at PAG XXI. Scientists from across the globe gathered to hear about genome annotation resources and online training at a morning workshop, and the exhibition booth was busy throughout the conference. Train online was very popular, and delegates flocked to sign up to the portal and receive a 'love data' T-shirt.



- ⇒ Science or art? This issue's cover image was taken by Jelena Tica for an EMBL Photography Club assignment to capture 'Winter beyond the Cliché'. Jelena's *Finding Neverland* shows a dry plant on a sunny day transformed into an icy snowflake by inverting the colours. Another of Jelena's images was among the three winning photographs selected by visitors to the Club's first exhibition.
- ⇒ The Structure Integration with Function, Taxonomy and Sequences (SIFTS) resource, an ongoing collaboration between the Protein Data Bank in Europe and UniProt, celebrated its tenth anniversary at the end of 2012. Based

at EMBL-EBI, it provides a resource for semi-automated residue level mappings between UniProt and PDB entries, as well as other potentially valuable resources for biomedicine.

- ⇒ From 23–25 January the joint DESY and European XFEL User meeting took place on the DESY campus attended by around 800 users, students, scientists and employees. At the joint poster and exhibition session that marked the end of the meeting, the EMBL team was present to promote their current activities. "This was the ideal arena to make important contacts for the upcoming Biology and Synchrotron Radiation (BSR) conference, which we're determined to make a great success," says head of EMBL Hamburg administration, Margret Fischer. BSR 2013 takes place in Hamburg from 8–11 September: www.bsr2013.org.

events@EMBL

1 March EMBL Heidelberg

Science and Society Forum lecture:
Ancient Pathogen Genomics: Genome of the Black Death, Johannes Krause, University of Tübingen, Germany

3–8 March EMBL Heidelberg

EMBO practical course: High-Throughput RNAi and Data Analysis

11–16 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

18 March EMBL-EBI

CAGE-KID Cancer Genomics Course

22 March EMBL Monterotondo

Science and Society Forum lecture:
Mnemosyne's Paradox, Joe Davis, Department of Biology at MIT, USA

25–27 March EMBL-EBI

Next-Generation Sequencing Workshop

6–12 April EMBL Heidelberg

EMBO practical course: Analysis of small non-coding RNAs – From discovery to function

9–10 April EMBL-EBI

Heads of Units / SSMAC Meeting

15–19 April EMBL Hamburg

EMBO practical course: Computational Structural Biology - From data to structure to function

26 April EMBL Heidelberg

11th open MMPU Research Day

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

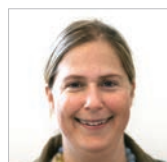
people@EMBL



Antonio Costantino has joined EMBL Heidelberg as a Corporate Partnership Programme officer. Antonio is a master of Development Studies, and joins following a role working in the corporate engagement team of Habitat for Humanity International, based in Bratislava. In his new role, he will work to expand the existing Corporate Partnership Programme, and will be the main point of contact for EMBL's corporate partners.



Oliver Stegle has joined EMBL-EBI as a research group leader. Previously, Oliver worked as a postdoc at the Max Planck institutes in Tübingen, affiliated with both the MPI for Biological Cybernetics and the MPI for Developmental Biology. His group is developing accurate computational and statistical methods to study the genotype-phenotype map on a genome-wide scale.



Sarah Teichmann is also a new research group leader at the EBI. Sarah has a PhD in Computational Genomics and joins following a position as group leader at the MRC. Her group is interested in the evolution and dynamics of regulatory and physical interaction networks, focusing on two main areas: transcription factors and the regulation of gene expression, and physical protein interactions and protein complexes.

awards&honours

Prize for revealing research

EMBL Heidelberg group leader John Briggs was awarded the Chica and Heinz Schaller Prize at a ceremony at the University of Heidelberg on 8 February.

The 100 000 Euro prize, which is presented to flexibly support further research, is awarded to young Heidelberg-based researchers for outstanding work in biomedical research. The award panel highlighted the impact of the Briggs group's contributions to research and methods development in virology, particularly in revealing complex viral and cellular structures using cryo-electron microscopy. "Research is a team effort and

Heinrich Betz (MPI for Brain Research), John Briggs and Hans-Georg Kräusslich (University of Heidelberg)
Photo courtesy of the University of Heidelberg



the award recognises achievements of group members past and present and our collaborators, all of whom have made crucial contributions to our scientific work," says John.

EMBL on the move



EMBL's new mobile-optimised website – m.embl.org – aims to better connect you with activities, updates and information from across the lab. Incorporating select content from the full site, the mobile version gives visitors and staff quick and easy access to a host of online features anytime and anywhere using a mobile device. The site will continue to grow and evolve, and the current beta version will be regularly updated to support continual testing and improvement. Feedback is welcome, please email mobile@embl.de.

EMBL&cetera issue 73, February 2013.
Published by EMBL's Office of Information and Public Affairs, Meyerhofstraße 1, 69117 Heidelberg. email: info@embl.de.
Available online: www.embl.org/newsletter.
Editors: Chloë Balhary, Adam Gristwood.
Editorial support: Manuela Beck, Spencer Phillips, Lena Raditsch, Petra Riedinger, Silke Schumacher.
Contributors: Charlotte Banfield, Lindsey Crosswell, Joanna Kirkpatrick, Michael Müller, Katrina Pavelin, Mehrnoosh Rayner, Mary Todd Bergman, Rosemary Wilson.
Photographic support: EMBL Photolab.
Printed by ColorDruck, Leimen.

