

EMBL etcetera

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Looking ahead

More than 300 people packed into the EMBL Advanced Training Centre auditorium to see Nobel Laureate Harald zur Hausen outline his priorities for cancer research on 30 March. Among them were two classes of high school students visiting as part of the EMBL-led i-Next initiative, set up to enhance the teaching of molecular biology in German schools. Harald spoke about the role of infectious agents in cancer, societal challenges and wider issues in global human health. He also took time to speak to students, giving career advice and insight into the life of a Nobel Prize winner.

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Research matters



What the Memorandum of Understanding means for EMBL, [page 2](#)

Social networking with genes

[New method enables scientists to 'suggest' genes, facebook-style](#)

Just like facebook suggests friends, scientists can now suggest genes that interfere with each other, thanks to a technique developed by scientists at EMBL and the German Cancer Research Centre (DKFZ). Published in *Nature Methods*, it helps scientists to understand how different genes interact with each other and enables researchers to identify genes that are likely to influence each other's effects. The approach could lead to advancements in medical treatments for diseases such as cancer.

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Research matters

On 4 March, EMBL and the European Commission (EC) signed an historic Memorandum of Understanding (MoU).

The agreement formalises a commitment to cooperate to further the development of European research in the life sciences. EMBL Director General Iain Mattaj considers the implications of the agreement.

What is the significance of the MoU?

There are not many research organisations that focus at the continental level. The agreement is recognition of the fact that both EMBL and the EC have a responsibility and a desire to develop strategies and solutions that are effective on a European scale, and both are committed to work to establish the European Research Area (ERA) as a single entity.

Are there any concrete actions that will follow the MoU?

Some aspects are still not defined in detail. However, it is clear that while a number of points of contact between EMBL and the EC have developed over time as a result of



The agreement presents an opportunity for EMBL and the EC to work together more efficiently, says Iain

activities that we have jointly been involved in, what is missing are a broader set of contacts across our organisations that would enable us to work together more efficiently.

Why are cooperation and partnership so important?

Producing something as complicated as a unified research area – a flat playing field where people are both able to interact with each other as equals and to move between different institutions – is a process that requires getting many stakeholders and actors to work together. That has not yet been achieved, but it is certainly achievable and desirable. European project funding has traditionally been one of the ways in which such collaborative efforts across institutions and countries can be promoted. While there has been justified criticism of some aspects of the European Framework Programmes, I think that if you

look at the result, rather than the process, you can see something that is extremely positive: a major improvement in European research activity and commonality of purpose.

How will the agreement impact EMBL's research priorities?

The major reason for working together is to enable priorities to be achieved, rather than impacting on priorities *per se*. We can play highly complementary roles in areas that are useful for the European research community. EMBL's services and infrastructure, for example, have had considerable support from the EC and in turn have brought major benefits to European science. Processes such as the European Strategy Forum on Research Infrastructures (ESFRI) are having a significant impact on the way people are approaching individual aspects of European research. I am very positive about what can be achieved in developing such initiatives.

Investing in the future

Two prestigious grants under the French 'Invest in the Future' initiative have been awarded to the Unit of Virus Host Cell Interactions (UVHCI), an international research unit involving collaboration between EMBL, the University Joseph Fourier, the French National Centre for Scientific Research (CNRS) and several other partners.

The 14.7 million Euro Grenoble Alliance for Integrated Structural Biology (GRAL) project brings together UVHCI, the Institute for Structural Biology (IBS) and the Institute of Life Sciences Research and Technologies (IRTSV) to combine key areas of structural and integrative cell biology.

A second grant, for the French Infrastructure for Integrated Structural Biology (FRISBI) project, awarded around 12 million Euro to UVHCI and IBS to finance the development of large structural biology equipment such as NMR and EM.

"The major benefit for all partners is the increased critical mass of scientists working on problems in structural and molecular virology," says Stephen Cusack Head of EMBL Grenoble and Director of UVHCI.

New partners in industry

EMBL has strengthened its links with enterprise, welcoming Astellas Pharma to the EMBL-EBI Industry Programme and Nikon to the EMBL Corporate Partnership Programme.

These programmes support colleagues in industry through training and dissemination of cutting-edge technologies to life science researchers in small and large business alike, enhancing the global impact of scientific innovation.

"Our programme has been supporting the needs of the pharmaceutical and agri-science sectors for over 14 years, enabling companies to adapt quickly to – and maximise the benefit from – innovations in bioinformatics," says

Dominic Clark, manager of the EMBL-EBI Industry Programme. In the past year the EMBL-EBI programme has been joined by three new companies, including biopharma partners UCB (Union Chimique Belge) and Novo Nordisk A/S.

EMBL's senior manager of Resource Development Jörg Fleckenstein adds that "Nikon's involvement in the Corporate Partnership Programme will not only be a corporate partnership, but also a scientific partnership. Nikon brings to EMBL important expertise in biooptics and there will also be collaborations beyond the programme through training in and applications of imaging technology."



EMBL Associate Director Matthias Hentze (right) welcomes Nikon to the CPP



Hiroki Shirai and Kazuhisa Tsunoyama from Astellas Pharma

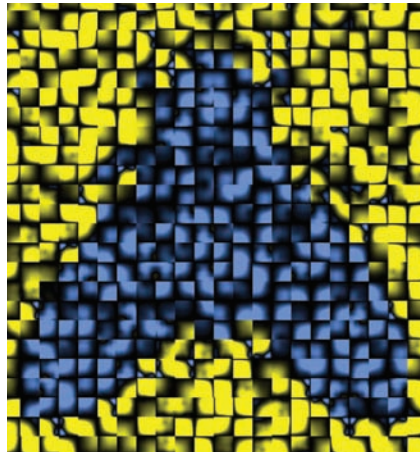
Genes you may know...

New technique that identifies relations between genes could pave the way for medical breakthroughs

Just like facebook suggests friends, scientists can now suggest genes that interfere with each other, thanks to a new method developed by the groups of Wolfgang Huber at EMBL Heidelberg and Michael Boutros at the German Cancer Research Centre (DKFZ).

In recent years, a number of studies have linked different genes to a wide range of diseases, but these links were often weak and not clear-cut, possibly because individual genes often do not act alone. The effects of a particular gene can depend on what other genes a person carries, and Wolfgang and Michael's new method enables scientists to uncover and measure those combined effects. By silencing two genes at a time, and comparing the effect to what happens when you silence only

one or the other member of each pair, researchers can identify genes that amplify,



A montage of graphs depicting genetic interactions

cancel out or mask each others' effects – that is, genes that interact with each other.

Genes that have similar genetic interaction profiles are likely to influence each other's effects, in much the same way that two people who have many friends in common on facebook probably know each other – even if they themselves are not facebook friends. Wolfgang and Michael's teams can now suggest such 'friends' – to say, genes that are likely to affect the same cellular processes. They have already used the new technique to identify a novel component in a cell-signalling process called the Ras pathway, which is known to go awry in tumour cells. In the long run, the new approach could help predict patient outcomes and adapt treatments for diseases such as cancer.

Exploring the genome's molecular secrets

Roving snippets of DNA that move from place to place within the genome – often called jumping genes – can have detrimental effects by disrupting important genes and causing severe genetic disease. But a team led by EMBL Heidelberg group leader François Spitz has used this characteristic to their advantage in gathering information about what is happening in different places in the genome.

Their technique, known as GROMIT, enables exploration of the large part of the genome that does not code for proteins by using a jumping gene as a biological informant. The team can make the jumping gene move 'on command' to a different location in a mouse's genome, where its reaction to the presence of regulatory elements gives important information about the area of the genome in which it is sitting, areas that are at present poorly characterised.

Non-coding parts of the genome are believed to play a significant role in what makes each of us unique, determining where, when and to what extent genes are turned on, or expressed.

François' group found that these regions were filled with regulatory activities distributed across very large distances, indicating that regulatory elements are not restricted to act on specific genes, as previously thought, but instead could potentially control whatever is within their reach.

The research, published in *Nature Genetics*, suggests that mutations that simply shuffle genetic elements around (without deleting or altering them) can have striking effects, by bringing genes into or out of specific regulators' zones of influence.

“With GROMIT, making complex chromosomal rearrangements is now more of an issue of space than of time and workload, as it was in the past”

– Sandra Ruf

“Our findings challenge the gene-centric view of gene regulation and suggest new mechanisms that could link structural differences between individual genomes to phenotypic diversity and disease,” says François.

The technique paves the way for exploring the functions of all the sequences of DNA that make up a genome.

“We were confident about the approach, but we were not expecting such high efficiency,” adds Sandra Ruf, lead author on the paper. “With GROMIT, making complex chromosomal rearrangements is now more of an issue of space than of time and workload, as it was in the past.”

The research could facilitate the development of mouse models for human diseases such as Williams-Beuren syndrome and Down syndrome.

Synthetic biology used to study proteins

Proteins inside living cells can be effectively visualised using synthetic biology, EMBL scientists have shown.

A team led by EMBL Heidelberg group leaders Carsten Schultz and Edward Lemke developed a method that enables researchers to label even rare proteins precisely for optical imaging in living cells. Their new technique could in principle also be adapted for use in Magnetic Resonance Imaging (MRI).

By using a modified transfer-RNA synthase, the research, published in *Angewandte Chemie*, swapped one of the protein's building blocks – an amino acid – with an artificial one created by the scientists. The change is undetected by the cellular spell-checking machinery, and once incorporated into a protein of interest it acts as a loading site to which different labels can be attached in what is called a catalyst-free 'click' reaction.

The *in vivo* technique, tested in *E. coli*, has several advantages compared with previous methods, enabling high-contrast and single molecule fluorescence microscopy and reducing disturbance on the cell. The team is now looking to implement the technique in mammalian cells.

10 000 in the bank

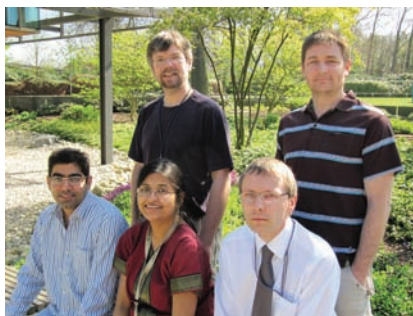
This April, the Protein Data Bank in Europe (PDBe) annotated its 10 000th structure for inclusion in the Protein Data Bank (PDB), a freely available resource for life science researchers. The new structure, 2YF6, is a chicken MHC-peptide complex and was determined at Oxford University. MHC molecules display protein fragments from within the cell to T cells, allowing the immune system to identify a potential problem.

PDBe is the European arm of the Worldwide PDB (wwPDB) organisation. Together with its partner organisations in the US and Japan, it acts as a unified deposition, processing and distribution centre for biomacromolecular structures. The PDB archive features more than 72 000 curated entries, and its users download structures approximately 300 million times a year.

All structures in the archive are experimentally determined. When a new structure is deposited, it is carefully examined and curated. In this process, relevant information is added (such as about small chemical entities present in the structure), and the structure is cross-linked with other

biological data, such as protein sequences and functional information held in other resources. The goal of PDBe is to provide an integrated resource for biomedical and agri-food researchers, including molecular and cell biologists, medicinal chemists,

The PDB archive features more than 72 000 curated entries, and its users download structures approximately 300 million times a year



Members of the PDBe annotation team at Hinxton. From left to right, back: Martyn Symmons, Glen Van Ginkel; front: Gaurav Sahni, Sanchayita Sen, Matthew Conroy

biochemists and many others. PDBe has developed several novel tools that add considerable value to the data. For example, users can compare a protein structure to the entire archive to find similar structures – which may yield clues about unexpected evolutionary relationships – or use PDBe's web-based tools to carry out sophisticated analyses of 3D data in seconds.

Together with its wwPDB partners, PDBe is currently developing a new software system for deposition and annotation, which will ensure that it can process the growing number of ever-larger and more complex structures with the same number of staff as today. In the future, PDBe will further integrate structural data with biological resources such as Reactome, which provides information about pathways, and chemical resources such as ChEMBL, a valuable database for drug discovery. The team is working with current and potential users to develop innovative ways to make structural biology data more accessible to all life science researchers. For more information: <http://pdbe.org/quips>.

EMBL visits Moscow for top science meeting

Just a stone's throw from historical monuments and architectural marvels such as the Kremlin and Red Square, representatives from EMBL joined leading scientists from Russia and worldwide at one of the country's top scientific meetings on March 21–25. Director of International Relations Silke Schumacher delivered a keynote presentation, discussing the role of EMBL as Europe's centre of excellence for molecular life sciences.

The conference, 'Biotechnology: State of the Art and Prospects of Development', brought together scientists, industry leaders and decision makers from a broad range of disciplines to network, disseminate

ideas and discuss strategies such as innovative knowledge transfer.

Some 3300 people attended the conference over five days, with EMBL staff speaking to delegates about opportunities such as scientific collaborations, the PhD programme and the Interdisciplinary Postdocs (EIPOD) initiative, which promotes highly interactive research between EMBL's research units.

"The conference is one of the most important science fairs in Russia, and there was significant interest in EMBL's activities – from students right up to institute directors," says Vladimir Rybin, senior officer in EMBL Core Facilities. "The EMBL stand was incredibly busy on all five days – information was flying off the shelves," adds Margret Fischer, senior administrative officer at EMBL Hamburg.

In December last year, the Russian Foundation of Basic Research signed a Memorandum of Understanding expressing significant interest in Russia becoming an EMBL member state. There are already close links through scientific collaborations of the Lamzin, Svergun, Schultz and Arendt groups.



Director of International Relations Silke Schumacher gives a keynote address at the conference opening ceremony

Global relief effort for Japanese science

EMBL has offered to host visitors from Japan in support of The Nippon Science Support Network.

The network was initially set up to coordinate relief efforts from Germany in response to the devastating earthquake in March and has now been extended to many countries worldwide. Users of the innovative website can highlight the availability of scientific positions, stipend schemes and services such as computer-server space that have been put in place for Japanese scientists.

The immediate focus for the country is on an immense humanitarian relief effort, but the earthquake has also been a catastrophe for science with closed offices and damaged equipment extending down the east coast to Tsukuba Science City, where 40% of Japan's researchers are based.

Iain Mattaj, EMBL Director General said: "EMBL will certainly be willing to host visitors as part of this important initiative, particularly those whose research complements that of our groups." More than 100 services have currently been uploaded.

For further information, see: www.nipponsciencessupport.net.

Above board

The EMBL Alumni Association board held its 17th meeting in Heidelberg on 14 March. The board was delighted to note the continued diversity of new memberships from all eras, staff categories and EMBL Units, and agreed to offer a special prize for the 2000th member. Currently the Association has 1787 members, 81% of whom are former EMBL scientists. The board would like to see this number grow to 2500 in the next year to capture 50% of EMBL's alumni population. To join visit our homepage!

Giulio Superti-Furga (Chair) thanked Oscar Martin-Almendral (Treasurer) for keeping the accounts, and EMBLEM for a generous annual donation of 2500 Euros towards the EMBL Alumni Association Fund. The board will conduct a major survey in the second half of 2011 in an effort to further improve services for its members and best utilise its available funds.

The Alumni Relations Office reported its priorities for 2011 to the board. These include working closely with EMBL departments to better utilise the alumni network, better support of and collaboration with the EMBL outstations, and encouraging the formation

of more local chapters. In preparation for the next big alumni reunion in 2014, the board agreed to prepare a special EMBL Alumni Association publication.

Giulio thanked all board members who will be stepping down before the September elections for their invaluable contributions (see article over, 'Our very outgoing board members'). Giulio, Maria del Mar Vivanco and Oscar agreed to stand for the positions Chair, Vice-Chair and Treasurer respectively, and Giovanni Paoletta, Anastasia Politou and Anastasios Koutsos agreed to stand as continuing board members.

The John Kendrew Award ceremony, which is always held during EMBL Lab Day, will be hosted this year by Maria, and presented by Sydney Brenner. The board looks forward to a large attendance of EMBL pre- and postdocs to hear the lecture from this year's prize winner, former Monterotondo postdoc Amaicha Depino.

The EMBL Alumni Association initiative for a European Molecular Biology Archive (EMBA) is still in its early stages, and Giulio and Mehrnoosh Rayner, Alumni Relations Officer, will meet at the end of April to review and edit a business plan before taking this to the Working Group.



L-R: Annalisa Pastore, Anastasia Politou, Claudia Koch-Brandt, Oddmund Bakke, Mehrnoosh Rayner, Giulio Superti-Furga, Freddy Frischknecht, Maria del Mar Vivanco

Mark your diaries...

10 June John Kendrew Award Ceremony/EMBL Lab Day

From 2–3pm in the EMBL ATC Klaus Tschira Auditorium. Followed by the Graduation Ceremony and Lab Day party.

Presenters: Sydney Brenner,

Maria del Mar Vivanco

Award winner: Amaicha Depino

• *Open to all EMBL staff and alumni*

24–25 June Greek local chapter meeting

Two-day meeting in the scenic hills of Dilofo, Greece.

Special guest: Christian Boulin

Organiser: Anastasia Politou

• *Open to all EMBL alumni in Greece*

2 July German local chapter meeting/EMBL Summer Party

From 11am–2pm at EMBL Heidelberg.

Organisers: Freddy Frischknecht and

Claudia Koch-Brandt

• *Open to all EMBL staff and alumni*

13 September Austrian local chapter meeting/The EMBO Meeting

From 5.30pm onwards in the

rooftop seminar room of the CeMM.

Participants will be transported by bus

from *The EMBO Meeting* to the CeMM

to enjoy a skyline view of Vienna, drinks and fun networking activities.

Organiser: Giulio Superti-Furga and

Ioannis Legouras

• *Open to all EMBL/EMBO staff and alumni*

19–30 September Online board elections

Make sure you cast a vote for the new

EMBL Alumni Association board.

Candidates for election will be listed

in the June and August issues of

EMBL&cetera.

September/October (date tbc) Iberian local chapter meeting

At CIC bioGUNE.

Organiser: Maria del Mar Vivanco.

• *Open to all alumni in Spain and Portugal*

4 November 18th EMBL Alumni Association board meeting

From 9am–6pm at EMBL Grenoble.

Please send items you would like to have discussed to the alumni office.

Our very outgoing board members

Before the EMBL Alumni Association (EAA) board elections in September 2011, eight members will be stepping down due to their end of term. Here they share their experiences working as board members, and their visions for the future of the EAA.

Oddmund Bakke

Professor, University of Oslo, Department of Molecular Biosciences



"I enjoyed acquiring a large network of international friends and scientists. I'd like to see the EAA remain a forum for contact with all alumni and a link to the member states."

Colin Dingwall

Professor, King's College London, School of Biomedical and Health Sciences



"A highlight was visiting the outstations to let them know what the EAA is trying to accomplish. Contributing to the establishment of a vibrant alumni network has been really rewarding."

Freddy Frischknecht

Group leader, Heidelberg University Hospital, Department of Infectious Diseases



"I enjoyed trying to be creative with a bunch of great people. I'd like to see our 'Alumnipe-dia' and archive initiative take off, and the John Kendrew Award continue going strong."

Bernard Hoflack

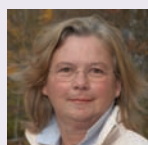
Professor, Technical University of Dresden, BioInnovations Zentrum



"I enjoyed being useful to the EMBL community. I'd like to see the EAA promote life sciences, especially for the next generations."

Claudia Koch-Brandt

Professor of Biochemistry, University of Mainz



"I liked staying informed about leading science, and contributing to the achievements of the EAA. Keep going and get the archive started!"

Cedric Notredame

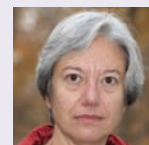
Group leader, Center for Genomic Regulation (CRG), Barcelona



"The EAA should focus on helping deserving young EMBL fellows secure stable positions and produce the best science they can after leaving EMBL."

Annalisa Pastore

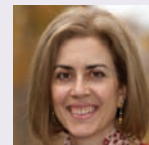
Group leader, National Institute for Medical Research, London



"I enjoyed meeting with people, not necessarily from my time, but with the same EMBL spirit of sharing and collegiality."

Niovi Santama (Deputy Chair)

Associate Professor, University of Cyprus



"I enjoyed participating in a very creative group, getting to know EMBL news first hand, and seeing ideas transformed to action."

A grand opening

CeMM, the Research Center for Molecular Medicine of the Austrian Academy of Sciences, proudly held the ceremonial inauguration of its new purpose-built building at the heart of the capital, right next to Vienna's general hospital.

Giulio Superti-Furga, Director and CEO of CeMM and Chair of the EMBL Alumni Association, hosted some 140 ceremony guests at the rooftop seminar room of CeMM, overlooking Vienna's skyline. Giulio introduced CeMM to the audience and explained its research strategy and goals, followed by presentations of many prominent members of the Austrian scientific and political landscape.

Opera singer Lars Woltdt made a surprise appearance in a lab coat as quack doctor Dulcamara (from *L'elisir d'amore* by Gaetano Donizetti), challenging molecular medicine and triggering a reply address from Giulio. The event



also featured a dancing choir and a big band consisting of CeMM students and postdocs. At the end of the event, a big party kept the audience entertained until the early hours.

– Ioannis Legouras, scientific assistant to the CeMM Director, former EMBL predoc



Main picture: (L–R) Federal Minister Dr Beatrix Karl; CeMM Director and CEO, Professor Giulio Superti-Furga; Vienna's City Counsellor for Culture and Science, Dr Andreas Mailath-Pokorny; President of the Austrian Academy of Sciences, Professor Helmut Denk. **Inset:** For one night only, the CeMM entrance is transformed into a dance floor

2020 vision

Nobel Laureate Harald zur Hausen set out his future priorities for cancer research on 30 March, delivering an EMBL Vision 2020 lecture where he urged greater focus on the role of infections as a major cause of human cancer.

Just over two decades ago few took seriously the theory that cancer could result from infection. But scientific breakthroughs, partly facilitated through gene and sequencing technologies, have enabled researchers to pinpoint the role of infectious agents such as bacteria and viruses in certain types of human cancer, issues Harald raised in an interview before his lecture.

“There is a growing interest in this field, especially amongst young postdocs,” Harald says. “At the moment we can link around 21% of global cancers to infections and the chances are this will increase in the future. It is not a problem today to identify infectious agents within cancer cells – a much more difficult task is to identify the role that they play in the causes of particular types of cancer.”

Harald’s pioneering research determined the role of the human papilloma virus (HPV) in cervical cancer, paving the way for the development of a vaccine. Yet vaccination rates in many countries remain alarmingly low, reflecting what he regards as misguided political and social concerns.

“There are diverse groups of people who are opposing vaccines,” he explains. “They



Students Katharina Sandritter and Freda Sorgenfrei from Marie-Baum-Schule in Heidelberg spoke to Harald as part of the EMBL-led i-Next initiative

are putting not only themselves at risk but their surroundings. With the HPV efforts there has not been a single death case that has been linked to the vaccination itself.

“Misleading information in the public domain has disastrous effects and people still die of diseases that could be totally avoidable through vaccination. To overcome this you need, in every country, the support of respective ministers of health, physicians, teachers and parents – there is still a lot of work to be done.”

In the developing world – where scientists suspect as many as 40% of all cancers are a result of infections – a whole set of additional challenges exist, issues Harald confronted recently in a series of high-profile lectures in Johannesburg. “A major problem is the cost of vaccines,” he explains. “Even if these are provided at reduced rates by pharmaceutical companies, \$20 for an individual shot in Vietnam is

still far too expensive for most people.”

And it is the wider message that Harald is looking to communicate, with a dual goal of encouraging more research and enhancing understanding of the risks increasingly linked with infection. “Worldwide, the risk factor associated with infections is now acknowledged to be even greater than smoking,” he explains. “But this is not recognised everywhere. It is important to raise interest, especially in the young.”

Forthcoming Vision 2020 lectures

10 May: Jack Szostak,
Harvard Medical School

8 June: Sydney Brenner,
Salk Institute for Biological Studies

www.embl.org/vision2020



Left to right: Students from Universidad Francisco de Vitoria enjoy the sunshine; Genecore head Vladimír Beneš addresses Norwegian clinicians; predoc Erika Donà gives Belgian master's students an insight into science in EMBL Heidelberg's fish facility

Welcome to EMBL!

More than 135 visitors from four member states were given a taste of life at EMBL Heidelberg at the beginning of April. Guests, including clinicians from Norway, teachers from Germany and master's students from Spain and Belgium, took part in separate programmes, organised by EMBL's Office of Information and Public Affairs that gave a diverse overview of EMBL's science and outreach activities. Participants attended scientific talks and lab tours as well as meeting with scientists and other members of staff, going away with a strong impression of EMBL as Europe's centre for excellence in molecular life sciences.

Save the date: Friday 10 June is Lab Day 2011!

Would you like to meet your colleagues from other EMBL sites? Finally put some names to faces? Learn more about your colleagues' projects? The annual EMBL Lab Day event at the main lab in Heidelberg is a great opportunity for all the above and more.

The morning programme will kick off with a selection of short scientific seminars, incorporating both large discussion groups and smaller, focused topical meetings. After lunch, proceedings will continue with the prestigious John Kendrew Young Scientist Award, followed by the predoc graduation ceremony, and a poster session, with posters

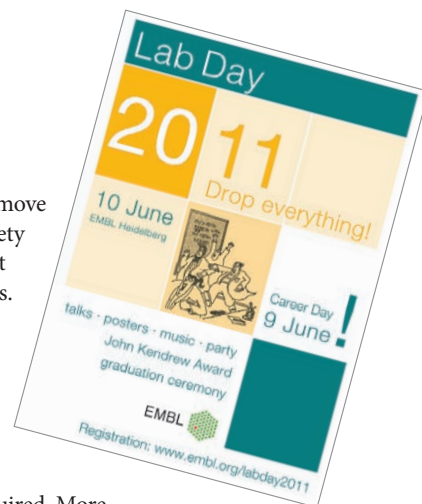
welcomed from every department. The day will conclude with a BBQ, live music and a late night party.

The programme will be available shortly, but if you have suggestions for the morning sessions, the organising committee – Eileen Furlong, Ramesh Pillai and Alvis Brazma – would be very enthusiastic to hear your ideas and feedback.

Lab Day will follow the annual Career Day taking place on Thursday 9 June, which will provide an overview of non-academic career possibilities, and present a selection of speakers with a scientific background, who

made the move into a variety of different professions.

Although both events are free of charge, registration is required. More information, including registration, will be available soon on the Career and Lab Day intranet page.



Science is spice of life at Cambridge festival

This year's Cambridge Science Festival on 19 March featured activities for visitors to explore the diversity of DNA sequences, genes, proteins and cells – the 'scientific spice of life' – with volunteers from EMBL-EBI and the Wellcome Trust Sanger Institute.

More than 1000 people joined in the activities throughout the day to make DNA sequence bracelets, race against the clock to sort data like a computer and play the 'cell memory game'.

New activity 'Helminths and helices' gave a new twist to 'snakes and ladders' and included a set of creepy facts about these parasitic worms. Visitors with a poetic flair were able to contribute science-themed haiku (see page 7), a form of Japanese poetry with a syllable pattern of 5, 7, 5.

Several of this year's activities are available from www.yourgenome.org, an online resource produced by the Sanger Institute.



The EBI would like to thank all the volunteers for their hard work developing the activities and helping out on the day. To find out more, visit: <http://comms.group.cam.ac.uk/sciencefestival/>.

Open and interactive at EMBL-EBI

On 15 March EMBL-EBI opened its doors to more than 40 students and early-career scientists who wanted to find out more about the EBI's research, services, training and career opportunities.

Highlights from the Open Day included: an overview of EMBL's post-doctoral opportunities by programme administrator Brenda Stride; an interactive session to showcase a new search engine from the EBI's User Experience Analyst Jenny Cham; and a research talk by group leader Julio Saez-Rodriguez, whose group models cellular networks to understand disease.

The next Open Day – to be held on 1 November – will include a talk from group leader John Marioni about his research into understanding how changes in genetic architecture can provide insights into the evolution of primates and other vertebrates. To learn more, please visit: www.ebi.ac.uk/training/opacity.

Seeking inspiration?

Look no further than the EMBL Advanced Training Centre (ATC), where the ATC Arts Committee is connecting staff and visitors with leading artwork. The group, which meets informally to deliberate work proposed for display, uses a formula that looks for high visual and emotional impact.

"Science and art both strongly require imagination and creativity," says Matthias Hentze, Associate Director of EMBL, who



Mitsuko Hoshino with her painting 'The Sea' in the ATC Rooftop Meeting Room

heads up the committee. "The art that we host at the ATC will, we hope, create an

inspirational atmosphere and we encourage people to come and look at it"

"The Sea" (pictured) by Japanese artist Mitsuko Hoshino is the first piece of artwork currently on display, located in the ATC Rooftop Meeting Room. It is open for all to view on Thursdays 1–3pm.

For further information, contact Anna Efstathiou at: anna.efstathiou@embl.de.



Clockwise from top left: Katherine Brown looks out over the panorama; Damien Devos, Janos Binder, Felix Klein and Jan Korbelt discuss their route down the Kitzsteinhorn; Toby Mathieson cautiously leads skiers down some off-piste (photos: Wolfgang Hübner)



EMBL in the snow

Winter finished late for many as EMBL embraced the slopes for this year's famous annual ski trip, which took place 24-27 March. The eagerly awaited event frequented the Austrian town of Zell am See, a quiet medieval centre in a beautiful setting between lake and mountain. More than 50 participants made fresh tracks in the snow as the weather provided opportunities for crashing through soft powder at 3000 metres, performing tricks in the snowpark and, for more hardened individuals, a quick dip in the lake. Despite a few (literally) cliff-hanging moments, everyone made it back home in one piece, together with stories of adventure – and telltale suntans. The trip, which is open to EMBL staff from all sites, alumni, family and other associates, has been running since 2002.

scientifichaiku

Secret code of life,
Understanding DNA,
Chromosomes unlocked

*Gianamar, participant,
Cambridge Science Festival*
Send your scientific haiku to
info@embl.de



Hot under foot

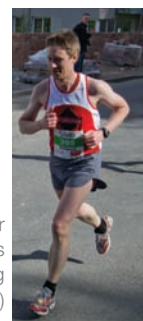
Punishing ascents and unseasonably warm weather didn't deter EMBL's growing contingent of runners taking to the streets for the Heidelberg Half-Marathon on 10 April.

The course, which takes in famous sites such as the Philosopher's Way and Heidelberg Castle was successfully conquered by EMBL participants, including Brenda Stride, Halldór Stefánsson, Matthias Hentze, Helene Badey, Ann-Marie Lawrence, Michael Hansen, Damien Devos and many others, including large groups from EMBO and Cellzome.

"There are many strategies leading to a successful race and therefore positions within the race are constantly changing, but I'm pretty sure that no one will forget the last 500m along the Heidelberg Hauptstraße where everyone feels like a winner," said IT's Matthias Helmling, who finished 26th out of more than 3500 starters with a time of 1:22:50.

"Although it was a tough course on a sunny day, the support amongst runners and spectators was overwhelming," added the Course and Conference Office's Ruth Hazlewood, who was running the race for the first time. "I hope next up will be a full marathon!"

EMBL's Wolfgang Hübner pounds the streets of Heidelberg (photo: Matthew Betts)



newsinbrief

⇒ Have you ever wanted to apply bioinformatics to your project but had no idea how to start? If so you might be pleased to know that computational scientists in EMBL Heidelberg units are developing a new Bio-IT service consisting of a central repository of scientific Linux software and a web portal. The new website, to be rolled out in the summer, will provide a straightforward and effective platform for people working in the diverse and increasingly dispersed biocomputing community to share expertise. The portal will enable users to upload documentation, share data and to access a dynamic online directory containing information on software packages, specialist experts, courses and other relevant events and potentially useful details. If you have any ideas or requests for the new service, please contact Reinhard Schneider: reinhard.schneider@embl.de or Aidan Budd: aidan.budd@embl.de.



⇒ EMBL turned green, white and red to mark the 150th anniversary of the unification of Italy on 17 March. Staff at EMBL Monterotondo enjoyed a national holiday, with events taking place across the country. Meanwhile, the Italian contingent at EMBL Heidelberg got together for a traditional lunch in the canteen (pictured).

⇒ The housing service at EMBL Heidelberg has a new and improved intranet site. Housing service's Lisa Kniepp can assist new EMBL Heidelberg employees in finding an apartment, and accompany those new to Germany to

viewings and contract signing. Contact: housingservice@embl.de

⇒ How can you control interview nerves? What are the common mistakes in grant applications? Why is feedback so important? These questions and more are answered by courses on offer in the new *General Training and Development* brochure, which is available at all EMBL sites. As well as offering some new courses, the 2011 edition highlights recommended 'career development paths'. Courses are offered throughout the year at EMBL sites.

2 May EMBL Heidelberg

Distinguished Visitor Lecture: Detlef Weigel, Max-Planck-Institute for Developmental Biology

5–8 May EMBL Heidelberg

Conference: Sixth International Congress on Electron Tomography

6 May Fitzwilliam College, Cambridge

Fifth EMBL-EBI Science and Society Symposium: Biodiversity and Endangered Species – Rethinking the Balance of Nature

9–13 May EMBL-EBI

Course: Programmatic Access to Biological Databases (Java)

10 May EMBL Heidelberg

Vision 2020 Lecture: Jack Szostak, Harvard Medical School

10–12 May EMBL Heidelberg

Course: Targeted Genome Editing using Zinc Finger Nucleases

13 May EMBL Monterotondo

Distinguished Visitor Lecture: Janet Rossant, The Hospital for Sick Children Research Institute, Toronto, Canada

16–18 May EMBL Heidelberg

Conference: Biology and Pathology of the Malaria Parasite

23–27 May EMBL-EBI

Course: *In Silico* Systems Biology for Complex Diseases: Network Reconstruction, Analysis and Network Based Modelling

27 May EMBL Heidelberg

Science and Society: Interrogating an Insect Society, Raghavendra Gadagkar, Indian Institute of Science

7 June ZMBH Heidelberg

Eighth public MMPU Research Day

8 June EMBL Heidelberg

Vision 2020 Lecture: Sydney Brenner, Salk Institute for Biological Studies

9 June EMBL Heidelberg

Career Day

10 June EMBL Heidelberg

Lab Day

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



Michele Garfinkel is the new manager of the Science Policy Programme at EMBO. Michele joins from the J Craig Venter Institute in Maryland, US, where she worked as policy analyst. She has a PhD in microbiology and has held positions at a number of leading institutions, including the AAAS and Columbia University. The Programme will work to understand emerging science policy concerns and craft options for policymakers, research administrators, and others who are concerned about the roles of science and scientists in society. She is looking forward to exploring Germany and meeting with friends and contacts around Europe.



Emmanuelle Bensaude joins EMBL Grenoble as scientific grant administrator. A cell biologist by training, Emmanuelle spent eight years studying a nasty little virus of pigs, before hanging-up her labcoat to specialise in science communication and project management for the UK government. She has joined EMBL to help manage grants and large European projects, such as FLU-PHARM and P-CUBE.



Jobs for the girls

It was all about girl (and boy) power in Heidelberg on 14 April, as the main lab welcomed 17 young visitors, aged 10 to 16, as part of the Girls' Day initiative.

Celebrated in many European countries, Girls' Day aims to give schoolgirls a taste of what are thought to be traditionally 'male' careers, such as science, engineering, maths and computing. But, as EMBL is rarely one to follow the crowd, the invitation to experience life at the lab is open to girls and boys.

Most of the visitors were family or friends of members of staff, and shadowed employees in labs, the core facilities, photolab, and even the ISG Hotel. The pupils were able to choose the career that interested them most, and could be found on the day getting to grips with everything from preparing protein gels to artistic direction.

The event was organised by the Office of Information and Public Affairs, who would like to thank everyone who hosted a visitor.

