

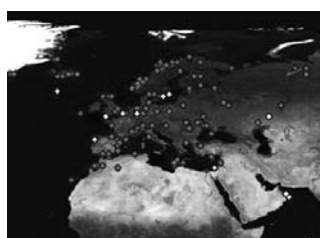


Croatia becomes nineteenth EMBL Member State

EMBL's Member State count is now up to 19 with the addition of Croatia, an important first step towards expanding EMBL's membership into Eastern Europe. The move brings Croatia into a family which encompasses virtually all of Western Europe and Israel. Decision-makers in the country see this as a significant measure towards increasing European research collaborations and integration. Over the past few years, Croatia has increased its scientific productivity by 150% and has developed considerable expertise in disciplines such as functional genomics and forensic medicine. [page 2](#)

Retirement of an EMBL mover and shaker

Everywhere you go at the five EMBL sites, you will find the mark of one of its longest-serving staff members, Ernst Heinmöller. For a quarter of a century he has been the lab's Head of Building Maintenance and Estate Manager, but on 1 May this year he handed over responsibility to Rainer Menzel. In this issue, Ernst shares some of his memories and outlines his future plans as consultant for the upcoming Advanced Training Centre project. [page 3](#)



From Google Earth to EMBLWorld

Environmental genome sequencing, in which samples are taken from ecological niches rather than single species, now account for a significant proportion of data in sequence databases. A novel resource, called EMBLWorld, has been developed at the EBI to provide a global view of the precise geographical locations that have been sampled. A new qualifier allows scientists submitting data to include grid references for their samples. Clicking on any of the locations marked on the map takes you straight to the relevant sequence records. [page 3](#)

SPINE enters the next generation

SPINE (Structural Proteomics in Europe), a major EU-funded project involving the Grenoble and Hamburg Outstations, has just come to an end – but its offspring is gearing up to take the reins. SPINE2-COMPLEXES, which starts in July 2006, will build on and continue the philosophy of SPINE, which ended in March 2006. SPINE2-COMPLEXES will focus on protein expression technologies (e.g. directed evolution expression screening strategies and eukaryotic expression systems) and structures of complexes from signalling pathways linking immunology, neurobiology and cancer. The targets are exclusively eukaryotic (mainly human) and viral proteins that interfere with signalling pathways. A novelty of the project is the inclusion of two labs from new EU member states in Eastern Europe, in Prague and Budapest. Additional funding for a project called TEACH-SG will pay for training workshops on technologies related to SPINE2-COMPLEXES. [page 5](#)

Lab Day 2006



Scientists from all the EMBL Units gathered in Heidelberg on 9 June for a hot and sunny Lab Day. The event included seminars, a ceremony for this year's graduating predocs, the traditional poster session (above) and an all-EMBL beer session. The day ended with a huge barbecue, lots to drink and music into the small hours. [page 2](#)

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Croatia signs up as nineteenth Member State



EMBL's Member State count is now up to 19 with the addition of Croatia.

The joining of Croatia is an important first step towards expanding EMBL's membership into Eastern Europe.

In past years, the country has increased its scientific productivity by 150% and has developed considerable expertise in disciplines such as functional genomics and forensic medicine.

The first delegate to represent Croatia in EMBL's Council will be Professor Kresimir Pavelic, the Director of the Division of Molecular Biology at Croatia's renowned Ruder Boskovic Institute.

"We are very pleased to welcome Croatia as a new member to EMBL's international community," says EMBL DG Iain Mattaj. "Molecular biology in Croatia has progressed tremendously over the last few years and EMBL will without doubt benefit from the unique skills and competence the new member provides."

"Joining EMBL is a very important step for science and research in Croatia," says Dragan Primorac, Croatia's Minister for Science, Education and Sport, who will visit EMBL in early July. "Participating in such a world-class European research organisation will give the rapidly growing field of molecular biology in Croatia a boost and will help integrate Croatia's scientific elite even better in the European research community. Croatia plans to take a very active role in EMBL and hopes to contribute to European molecular biology in many positive ways."

Since its foundation in 1974, EMBL has continuously expanded its membership and now encompasses virtually all of Western Europe and Israel.

Five facts* you might not have known about Croatia

1. Croatia was the first country to recognise the United States in 1776.
2. It is the mother country of the necktie, the fountain pen and the propelling pencil.
3. Croatia is considered to be shaped like a croissant due to years of expansion by the Turkish empire.
4. Croatia won the Eurovision song contest in 1989.
5. The coastal town of Split is so-called because it was the birthplace of the banana split.

* facts may or may not be true

Another great score for Lab Day



Perusing the poster session; below left, Raimond Ravelli's the toast of the beer session; below right, Andreas Lingel receives his PhD certificate from Matthias Hentze

Scientists from all the EMBL Units gathered in Heidelberg on 9 June for a hot and sunny Lab Day. The event included postdoc seminars, a ceremony for this year's graduating predocs and a talk by ELLS' Julia Willingdale-Theune about a new project, SET-Routes. The traditional poster session, in which researchers from all EMBL labs present their work, was more inventive than ever.

Lab Day was also the day of the World Cup opening match, and die-hard soccer fans gathered to enjoy the game after an all-EMBL beer

session. For non-sporty types, music@EMBL performed a classical concert in the Operon.

The day was rounded off in true EMBL fashion with a huge barbecue, lots to drink and entertainment into the wee small hours. It was the end of an era, too, as the Main Lab's band performed for the last time. Together for several years under various guises and with changing line-ups, it is a perennial favourite for events like this, but now several of its members are leaving.



Alternative careers draw the crowds

There was more interest than the organisers had even dared to expect on Career Options Day at EMBL Heidelberg on 8 June – the proceedings had to be moved to the main auditorium when the audience of young scientists exceeded the capacity of the Small Operon.

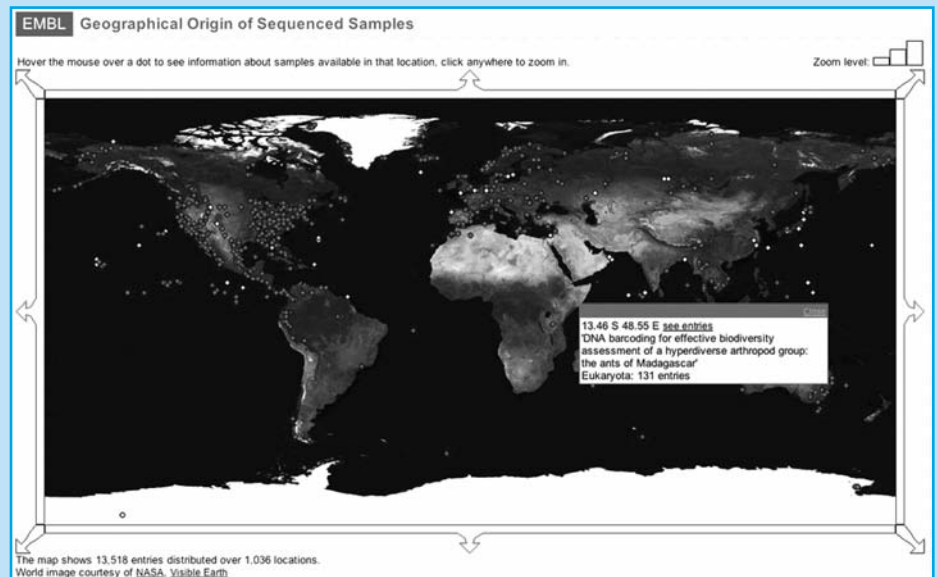
Organised by the postdoc association, the Postdoc Programme and EMBLEM, the day gave an overview of non-research career possibilities and featured speakers covering scientific writing and editing, industry, patenting and policy making. They talked about their careers and how they branched out from research into another field, prompting many questions from the audience and lively debate. In addition to the talks, group sessions allowed attendees to grill the speakers further, a couple of whom even had jobs to offer.

While some pre- and postdocs have already decided to make the leap into a new field, others were attending just to keep abreast of the possibilities. "It's useful to hear about how many different options there are out there," commented postdoc Cameron Mackereth from the Sattler Lab at EMBL Heidelberg.

There's a whole EMBLWorld out there

Environmental genome sequencing, in which samples taken from ecological niches rather than single species are sequenced to get a feel for the types of biological processes that are important in different environments, now accounts for a significant increase in the amount of data being submitted to the EMBL-Bank DNA sequence database and its two collaborating databases, GenBank in the USA and DDBJ in Japan. A new resource called EMBLWorld (www3.ebi.ac.uk/Services/EMBLWorld/EMBLWorld.pl) now provides a global view of the precise geographical locations that have been sampled, thanks to a new qualifier (lat_lon) that allows scientists submitting data to the public DNA sequence databases to include grid references for their samples.

EMBLWorld provides instant access to all the sequence entries that have been collected since last year; so far the databases have amassed more than 13,500 entries in 1,000 locations. Clicking on any of the marked locations takes you straight to the relevant sequence records. Phileas Fogg would have been most envious of the speed at which you can circumnavigate this virtual globe, learning



A screen shot of the EMBLWorld map

intriguing facts about the effect of ice ages on molecular diversity near the north pole, what macaroni penguins eat (not macaroni, by the way) and what it takes to live in hydrothermal

mud vents. A zoom feature lets you home in on your favourite region, and the locators are colour-coded according to the range of species in the samples.

Retirement of an EMBL mover and shaker

The very fabric of EMBL bears the legacy of one of its longest-serving staff members, Ernst Heinmöller. For a quarter of a century he has been the lab's Head of Building Maintenance and Estate Manager, but on 1 May this year he handed over to his successor, Rainer Menzel. Here Ernst shares some of his memories and future plans.

How long have you been at EMBL?

This year I completed 25 years. I started on 1 October 1981, and I've worked under all four EMBL DGs. Back then my first project was the complete restructuring of level 6 of the lab. Funnily enough, exactly the same thing is happening again now, 25 years later. It is as if I am starting and finishing my time as the Head of Building Maintenance with the same project.

But there must have been many other things that you have done in 25 years?

Yes, countless. When EMBL was founded in Heidelberg in 1975 it had an area of 13,000m². Today it is almost twice as big; the Annex building, the NMR building, Part 1D of the Main Lab, the Kinderhaus, EMBO's building and the two garages are only a few examples of what we have built since then.

Of course, I have also been taking care of the Outstations. The restructuring of EMBL Hamburg, the animal house in Monterotondo and the planning of the new Carl Ivar-



Photo: Marietta Schupp

Brändén Building in Grenoble were other projects.

How would you sum up your 25 years at EMBL?

It has been great to work here. EMBL is a very special place with a unique atmosphere. It is full of life and I particularly enjoyed being surrounded by many young people, who I feel have helped me to stay young myself. I loved

that every day brings new challenges. Every scientist has individual needs regarding the design of his lab and sometimes these needs go beyond what is possible, given the space or physical limitations. Often, though, we managed to do things that seemed impossible at first.

What is your most precious memory?

That's from right at the beginning; my first Christmas Party. Scientists had taken over the kitchen and prepared what they called a "Nation Buffet" with food from all the different countries that were represented by EMBL staff back then. It was an incredibly lively atmosphere: children were running around and a different language was being spoken in every corner. It really felt like a family under the Christmas tree, and I felt very welcome.

You have retired as the Head of Building Maintenance, but EMBL is not going to lose you completely, is it?

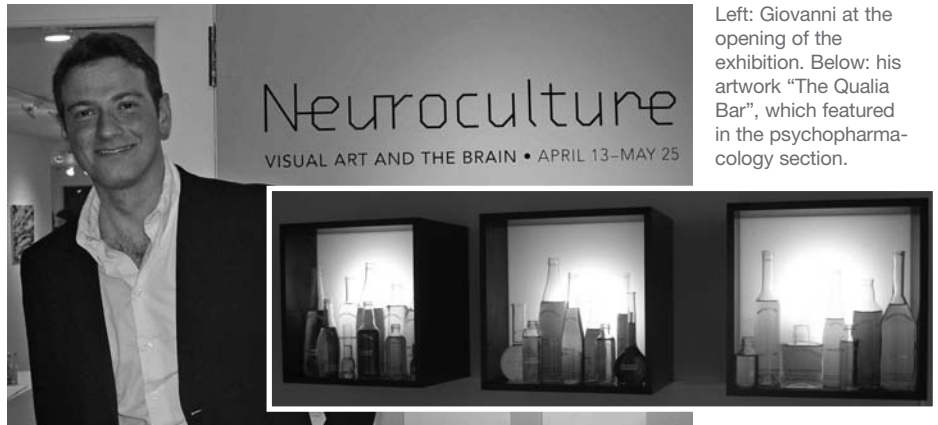
No, at least not in the near future. I will still be working here as the project manager of the new Advanced Training Centre (ATC) that will be built on the Heidelberg campus starting in autumn this year. The ATC is a great project and will help raise EMBL's international reputation even more. It will certainly be one of the highlights of my career and the perfect finale to my work at EMBL.

An artistic mind

EMBL Monterotondo's Giovanni Frazzetto got a taste of research of a different kind recently when he curated an art exhibition alongside art theorist Suzanne Anker.

"Neuroculture: Visual Art and the Brain" was on show at the Westport Arts Center in Connecticut, USA in April and May and featured works by contemporary artists in a variety of media, such as painting, sculpture, photography, installation and video, all inspired by neuroscience imagery and bearing social and philosophical references to neuroscience findings and processes.

It all came about as part of Giovanni's Branco Weiss Fellowship agenda, which is dedicated to exploring the relationship between science and society. He and Suzanne decided that in addition to writing something together, the best way to expose the public to the encounter between science and art was to set up an exhibition.



Left: Giovanni at the opening of the exhibition. Below: his artwork "The Qualia Bar", which featured in the psychopharmacology section.

The show drew in the crowds and was favourably reviewed in the *New York Times*, which admired the inventive ways in which the artists chose to picture what is essentially invisible. The Westport exhibition was just the beginning, too: Suzanne and Giovanni are promoting "Neuroculture" elsewhere and you will soon be able to visit a website devoted to the project, www.neuroculture.org.

Crystallisation on the curriculum

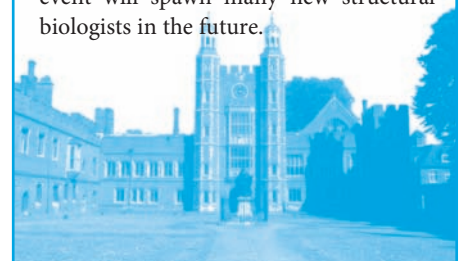
It was every schoolgirl's dream come true recently for EMBL Hamburg E-Star PhD student Simone Weyand, who spent a week at renowned UK public school Eton College teaching the boys the art of crystallisation.

Simone took the "Crystallisation Starter Kit", originally developed by Manfred Weiss in collaboration with Jena Bioscience (www.jenabioscience.com) for the EMBO teacher's workshop at the Hamburg Unit in 2003, where she was also one of the instructors. She split the week into a theoretical part and some smaller hands-on sessions.

The teachers and students of Eton were very impressed with Simone's presentation and tutorials, and were quickly able to grow some beautiful hen egg-white lysozyme crystals. The course was so successful that Eton decided to include this activity into their regular curriculum.

The college, which is near Windsor, has always been popular with the royals – Princes William and Harry went there most recently – and boasts several British Prime Ministers among its alumni, as well as the EBI's own Ewan Birney. The Eton way of life meant, among other things, that Simone had to be accompanied by a chaperone (called Madame) at all times.

Simone will go for a second visit in October, when the students will start to crystallise proteins. Let's hope that this event will spawn many new structural biologists in the future.



Mouse biologists from East and West meet in Monte

Eight mouse biology scientists from four Japanese institutes were welcomed to EMBL Monterotondo on 19-20 April for a Mouse Biology Meeting, co-hosted by IBC-CNR. The visitors were the latest to take advantage of EMBL's collaboration agreement signed in August 2005 with Japan's National Institute for Basic Biology (NIBB).

Nadia Rosenthal began the meeting with an introduction to the Mouse Biology Unit at Monterotondo. Then Naoto Ueno (NIBB) introduced his distinguished Japanese delegation to the Monterotondo "Mousers", with local Group Leaders presenting their work before the visitors took to

the floor to introduce their research on mouse limb and head development and transgenics. Glauco Tocchini-Valentini of IBC-CNR rounded off the meeting with an overview of IBC and EMMA.

Delegates and locals alike took advantage of the sunshine to enjoy lunch in the garden and discuss further ideas and possible collaborations. "This was a very interesting and constructive event for the Monterotondo community and it is likely that further exchange visits from this part of world will continue," enthused Giovanni Frazzetto, Monterotondo's Science and Society fellow.

– Rosie Maccagnano

A potent BREW

PhD students from Europe's major bioinformatics centres converged on the EBI in April to exchange ideas and hone their presentation skills.

The Bioinformatics Research and Education Workshop (BREW) was created five years ago by Robert Giegerich from the University of Bielefeld, Germany. The event has grown into a yearly fixture with participants from the Universities of Helsinki, Bergen and Bielefeld, as well as the Max Planck Institute in Berlin and the EBI. Thanks to its grass-roots approach and laid-back atmosphere, BREW offers students an ideal introduction to the international conference scene.

The two-and-a-half day workshop was centred mainly on students' talks. Most speakers explained the approach they are currently

using to solve a specific problem. After a round of constructive scientific comments, the speakers received written appraisals from the audience to help improve their rhetorical skills.

Guest speakers included new EBI Group Leader Paul Bertone, who presented his work with tiling arrays, and the Sanger Institute's Tim Hubbard, best known for his work on the Ensembl project. Paul Matthews, coordinator of the EBI's Industry Programme, gave a personal perspective on bridging the gap between academia and industry.

Organisers Katherine Lawler and Carolin Kosiol, both PhD students at the EBI, would like to thank all participants for their help, especially Liz Ford for her invaluable know-how and Alvis Brazma for providing the impetus behind BREW.

– Daniel Zerbino

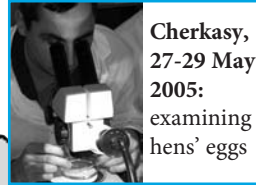
A year in the Ukraine

ELLS found itself covering more than 2,000 kilometres of Europe's biggest country in a year-long initiative to bring their LearningLABS to the Ukraine.

The European Learning Laboratory for the Life Sciences targeted about 90 teachers and educational officers from all over the country in a series of events which began with a pilot workshop in Cherkasy in May last year, entitled "Exploring the Molecules of Life", and ended in April this year.

The initiative took off thanks to Ukrainian postdoc Tanya Klymenko, who has been active in science education and outreach activities and has connections with the Ukrainian education and scientific communities.

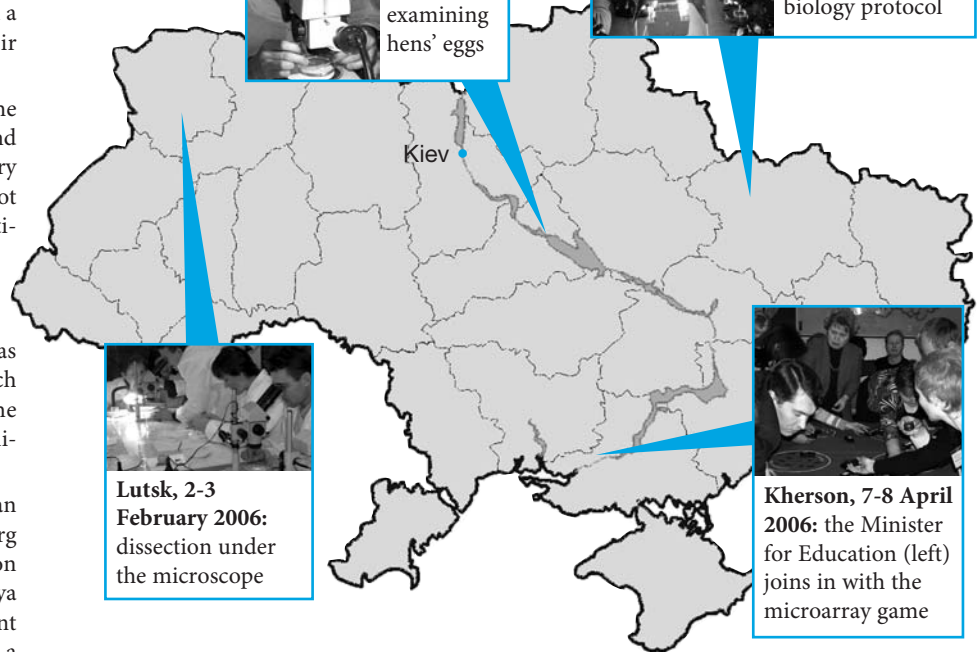
The first step was to bring four Ukrainian educators to a workshop at EMBL Heidelberg to learn how to conduct a LearningLAB on their own. Then ELLS, accompanied by Tanya and Maxim Nekrasov, an E-Star PhD student from Russia, took the microarray game, a Science and Society activity and other materials developed by UK's National Centre for Biotechnology Education to eager teachers at a the first host institute, the Bogdan Khmelnytsky Cherkasy National University.



Cherkasy, 27-29 May 2005:
examining hens' eggs



Kharkiv, 27-28 January 2006:
Tanya runs through the developmental biology protocol



Lutsk, 2-3 February 2006:
dissection under the microscope



Kherson, 7-8 April 2006: the Minister for Education (left) joins in with the microarray game

After the success of this initial visit, the Ukraine's Ministry of Education and Science in Kiev agreed to support more LearningLABS in Kharkiv, Lutsk and finally Kherson in April this year. The E-Star solidarity fund also con-

tributed by providing funds for travel and equipment. The Ukrainian participants are now well prepared to embark on a second wave of visits to more cities to run the LearningLABS themselves.

Adieu SPINE, bonjour SPINE2-COMPLEXES!

SPINE2-COMPLEXES, which starts in July 2006, will build on and continue the philosophy of SPINE (Structural Proteomics in Europe), which ended in March 2006.

SPINE began in October 2002 as one of the three EU FP5 pioneer integrated projects and was dedicated to the development and implementation of high-throughput techniques applicable to structural biology.

SPINE2-COMPLEXES will focus on protein expression technologies (e.g. directed evolution expression screening strategies and eukaryotic expression systems) and "From receptor to gene: structures of complexes from signalling pathways linking immunology, neurobiology and cancer". The targets are exclusively eukaryotic (indeed, mainly human) and viral proteins that interfere with signalling pathways. A novelty in SPINE2-COMPLEXES is the inclusion of two labs from new EU member states in Eastern Europe, in Prague and Budapest. There is also additional funding for a project called TEACH-SG that will pay for training workshops on SPINE2-COMPLEXES related technologies.

In SPINE2-COMPLEXES, EMBL and ESRF are again among the partners. ESRF will work on new technologies to measure very small crystals and EMBL will develop an improved online

humidity device to screen improvements in diffraction, which should be set up on BM14. In addition EMBL will pursue target areas in innate immunity, and, with the IVMS, viral proteins that interfere with host cell processes.

SPINE2-COMPLEXES has some solid foundations to build on. Over SPINE's lifetime, it has become commonplace for European structural biology laboratories to run high-throughput cloning, expression and nano-volume crystallisation robots. SPINE has also encouraged standardisation of high-throughput methods to facilitate interchange between labs. It has gone beyond the potentially divisive dichotomy between the "traditional" way of doing structural biology; the SPINE model of structural proteomics whereby high-throughput techniques are exploited for high-value targets is likely to become the norm for structural biology. Finally, SPINE laboratories have produced many structures (www.spineurope.org).

For Grenoble, SPINE was an important integrative factor underpinning the establishment of the PSB/CISB and what are now the PSB platforms in high-throughput expression (ESPRIT platform of Darren Hart) and crystallisation (Josan Márquez team, with initial important input of the IBS). Third, SPINE was one of the

driving forces behind the automation programme on the ESRF beamlines, a joint venture involving ESRF, EMBL and MRC-France. SPINE funds contributed to the development and mass construction of the sample changer as well as great progress on other aspects of automation (automatic crystal alignment, ISPyB database, etc), often in collaboration with other projects (e.g. eHTPX, DNA and BIOXHIT).

– Stephen Cusack

Spanish steps

A new partnership has been established with the Center for Genome Research (CRG) in Barcelona to form the EMBL/CRG Systems Biology Research Unit. It will be headed by Luis Serrano, who will move to Barcelona later this year. Five research groups in the unit will be funded by the Spanish government for nine years; the scientific focus will be the development of a quantitative understanding of biological systems. The research unit will be modelled on those at EMBL, and four group leaders will be recruited internationally and awarded time-limited contracts.

Sharing the secrets of successful services

Service teams from the EBI got together with their neighbours at the Wellcome Trust Sanger Institute on 12 June to discuss bioinformatics resources, with the aim of encouraging further interactions between the two institutes. Some 75% of the EBI's 300 staff are dedicated to providing bioinformatics services to the biomedical research community at large; at the Sanger Institute 10% of its 850 staff provide such support.

Organisers Graham Cameron (EBI) and Tony Cox (Sanger) provided background information and outlined the key challenges faced by each institute, more of which were addressed in a series of 15-minute talks. Rob Davies tackled the data explosion by explaining how the Sanger's core informatics division supports its sequencing pipeline. Paul Kersey described an EBI project that is addressing the data integration challenge: Integr8 draws together genomic, transcript and proteomic information into a single portal. A pair of talks that focused largely on data curation provided an excellent illustration of how closely related many of the activities are: the EBI's Michele Magrane explained how the UniProt Knowledgebase is curated, and Jennifer Harrow continued the curation theme by describing manual annotation of genomes at the Sanger Institute. This was followed by Guy Cochrane's description of the EMBL-Bank nucleotide sequence database in the context of the International Sequence Database Collaboration.

Data integration raised its head again in Jihur Gori's description of the Sanger's pipeline for sequencing single nucleotide polymorphisms (SNPs). Misha Kapushesky then showcased a new interface for ArrayExpress, which makes the export of data

easier and has a more flexible query interface.

With eight "lightning talks" of five minutes each, the audience learned about how both institutes manage their web infrastructure (Roger Pettett from Sanger and Brendan Vaughan from the EBI); the many applications of the SSAHA2 algorithm for rapid homology searching (Zemin Ning, Sanger); the Macromolecular Structure Database's role in the worldwide Protein Data Bank (Kim Henrick, EBI); the new database that's being built to house a trillion bases in the sequence trace archive (Martin Widlake, Sanger); how the EBI's systems team copes with 6,000 support requests a year whilst still managing to investigate, test and implement new systems (John Livingstone); the new pipeline set up for flu virus sequencing at the Sanger Institute (Karen Ambrose); and PRIDE – the Proteomics Identifications Database (Richard Côté, EBI), now accumulating data from the Human Proteomics Organisation's tissue proteomics projects whilst diversifying to collect data from gel-based proteomics experiments as well as mass-spectrometry based ones.

Formal proceedings were rounded off with a joint presentation from Tim Hubbard (Sanger) and Paul Flicek (EBI) describing the development of the Ensembl genome browser as a model for collaboration between the two institutes. In the general discussion that followed, the institutes resolved to coordinate their staff training programmes as well as to share more code (for example, the application programming interface developed at the Sanger Institute for Ensembl could be used to provide programmatic access to Genome Reviews). A barbecue provided plenty more opportunity for fruitful discussion as well as a chance to bask in the glorious weather.

DIY Tips #3: a recipe for success at the Cambridge Science Festival (18 March)

Ingredients:



at least 30 enthusiastic volunteers from the EBI and Wellcome Trust Sanger Institute;



several kilos of jelly babies, cocktail sticks, coloured beads and balloons;



a few laptops;



and 1,700 visitors.

Method:



Add visitors to other ingredients gradually over an 8-hour period, mixing thoroughly.



Photo: Mehmoosh Rayner

On 14-15 June the Board of Directors of the Swedish Research Council visited EMBL to find out about our special culture and discuss future plans with the Director General. The delegation of 28 was led by Chairman Bengt Westerberg and included Director General Pär Omling and Deputy Director General Gunnel Gustafsson.

Photos: Cath Brooksbank



A scientific voice in European policy-making

EMBO is well known for its training opportunities and journals. These are major pillars of the organisation, but EMBO's true reach goes much further. A less visible but equally important contribution to European research comes from the organisation's involvement in science policy.

EMBO has been influencing science policy since the early days of the organisation. With a founding mission to promote a new concept of molecular biology in Europe, EMBO could not fail to impact policy-making. By stressing mobility, internationalism and the need for a high-quality central laboratory (EMBL), the founding members of EMBO changed the face of the European research landscape.

Since then, EMBO's input into science policy has become more targeted. In the 1970s, the organisation played a lead role in discussions on recombinant DNA experiments. Most recently, EMBO could be seen mobilis-

ing scientific opinion on the European Research Council (ERC). The strength of EMBO's voice in these policy-making arenas is based on the collective reputation of its scientifically excellent networks – the EMBO Members in Europe, associate members worldwide, a growing network of EMBO Young Investigators and thousands of EMBO Fellows who maintain close contact with the organisation.

These networks are EMBO's most valuable asset and at the core of the organisation's influence on European policy. The most obvious example was EMBO's role in the move towards establishing the ERC. EMBO first called for an

“EMBO recognises its responsibility ... to reflect the overall viewpoint of its most valuable asset – its scientific networks”

ERC in 2000. That same year the organisation came together with EMBL, FEBS and ELSO to form a coalition of life science organisations, the European Life Sciences Forum (ELSF). Subsequently, the Initiative for Science in Europe (ISE) was founded to represent all sciences. EMBO continues to work with ELSF and ISE to monitor the development of the ERC

and other EU policy, with infrastructure for the life sciences as a new target for action.

EMBO also contributes to policy in other areas. Currently an EMBO working group of leading stem-cell scientists is preparing a document that will offer scientific input on the issues surrounding stem-cell research. In 2005, a similar exercise gave rise to a briefing paper on the use of animals in laboratory research. In previous years, EMBO has looked at the influence of science policy on career development and the progression of women working in the life sciences.

One of EMBO's journals, *EMBO reports*, offers a monthly forum for discussion of topics related to science policy – providing scientists and other interested readers with a variety of perspectives. EMBO reviews of life science programmes in different European countries, most recently in Spain, also have a knock-on effect on science policy, as do initiatives such as the EMBO Installation Grants, which are designed to strengthen research in areas of Europe where there is still work to be done towards top quality science.

In all of these activities, EMBO recognises its responsibility to provide a well-informed and independent perspective that reflects the overall viewpoint of its most valuable asset – its scientific networks.

– Frank Gannon

www.embo.org/policy

Pavlov's flies reveal memory secrets

As any student knows, last-minute cramming for an exam is all very well, but if you want to be sure of remembering information over a longer period, a more sustained approach is required. And while fruit flies are usually worrying about more immediate concerns than how they're going to do in their finals, they're now helping an EMBL scientist explore the mysteries of long-term memory as part of a newly funded collaborative project.

“For long-term memory, you need gene expression to be altered. Unlike in short-term memory, you need to change which genes are active,” explains EMBL Heidelberg Group Leader Andreas Ladurner who, together with a neurobiologist colleague from Cold Spring Harbor Laboratory, will study the subject in *Drosophila*. “This alteration seems to happen at the level of chromatin structure, and is dependent on a mysterious polymer.

“We'll be looking at how gene activation and transcription play a role in the establishment – or not – of long-term memory, and how this particular modification of chromatin, the packaging of the DNA, manages to alter the function of neurons.”

Andreas and collaborator Josh Dubnau

have secured a Human Frontier Science Program grant for the project, which will begin in the autumn. The criteria for the \$750,000 grant, which supports basic research in the life sciences and particularly encourages principal investigators at the early stages of their career, demanded that the project be “innovative, interdisciplinary and intercontinental”. This is where Josh comes in to complement Andreas' molecular approach: the New York-based neurobiologist will be using traditional behavioural conditioning techniques on *Drosophila*.

“The great thing about this grant is that it is awarded to brand new projects, so we can be quite daring in our proposal,” says Andreas. “It's also completely flexible, so we have free rein over how to use the money. I'll be taking on new staff who will have the chance to travel frequently between the two sites and gain experience in two of the world's best institutes.” Contact Andreas at ladurner@embl.de for more details.

If you have a proposal for an innovative and interdisciplinary postdoc or network project, visit www.hfsp.org for information about the Human Frontier Science Program.

Another grant granted

Andreas isn't the only EMBL scientist to receive a Human Frontier Science Program grant this year. Carl Neumann from the Developmental Biology Unit at EMBL Heidelberg has been awarded funding for a project which will also begin in the autumn and involves the study of heparan sulphate proteoglycans, proteins on the cell surface which interact with secreted signalling proteins and play an important role in extracellular space.

Alongside three other groups from Salt Lake City, USA and Uppsala, Sweden, the multidisciplinary project will combine biology, biochemistry and synthetic chemistry to examine this new level of regulation of intercellular signalling and to determine if specific modifications are important for specific signalling events. While Carl's group looks at zebrafish, his chemistry-based collaborators will contribute with synthesised inhibitors and new insights into the composition of the enzymes involved.

News from the Alumni Association

Chapter meeting planned for alumni in Austria

The EMBL Alumni Association local chapters serve as important platforms for scientific exchange, in organising scientific meetings, seminars, expertise and resource sharing, and social gatherings. They can also provide a unified and powerful voice to local and national politicians and funding bodies, and help to further science in their regions.

Each chapter is headed by EMBL alumni who voluntarily coordinate activities and events in their area. The Austrian chapter, coordinated by Silke Pichler and Anne-Marie

Frischauf (also EMBL Council's Austrian Delegate), will have their next meeting in Salzburg at the Joint Annual Meeting of the Austrian Society of Biochemistry and Molecular Biology on 25-27 September (www.ogbm.org/Jahrestagung/).

The German chapter head, Claudia Koch-Brandt, would like to encourage all EMBL alumni in Germany to attend the Staff Association Summer Party on 22 July, where she will be gathering feedback to organise the next German local chapter meeting.

“Match-making” database a success story

The EMBL International PhD Programme's Shared Applicant Pool, which was launched in December 2005, has been a great success and has proved to be an important interface between alumni and the lab.

So far 139 users, 113 of them EMBL alumni working as Group Leaders or principal investigators, have taken advantage of the service to find students.

The EMBL International PhD Programme has also had a lot of positive feedback from the students themselves who have been “found” via the pool and have secured suitable places elsewhere.

The names of these highly qualified PhD applicants who, for the simple reason of lack of capacity, do not make it into EMBL, are entered into the pool when they register and give their consent. Their data can then be accessed by independent investigators who are seeking students.

EMBL alumni can visit www.embl.org/training/phdprogramme/applicantpool.html to apply for a password to access the data.

science&society



The real Giuseppe Testa

A clone is a clone is a clone? A question of definition

It's always good to welcome alumni back to EMBL, and one recent visitor was not only coming back to his old stamping ground but also contributing to EMBL's Science and Society Forum seminar programme.

On 12 June Giuseppe Testa, now a Group Leader at the Laboratory of Stem Cell Epigenetics, European Institute of Oncology, Milan, addressed the EMBL Heidelberg audience on the subject of “Reprogramming Genomes and Reframing Rights: Legal Cultures of Cloning”. After leaving EMBL with his PhD in 2001, Giuseppe's scientific work has concentrated on stem-cell biology and genome engineering. His interest in the interface between science and society, which began in his EMBL days and has led to his current Branco Weiss Fellowship, made him the ideal person to introduce the question of the identity of clones and public understanding of the issue.

To look at potential answers to the question “What is a clone?”, he took the UK, Italy and the USA as three examples of countries with differing legislations. When policies are being

crafted to regulate, accommodate or resist some of the latest developments in human biotechnology, the question of identity can often be a defining or deciding factor. The same scientific-technological objects, for example clones, can be framed in entirely different ways in different political cultures. In addition, Giuseppe also addressed the question of the challenges that this varied regulatory landscape poses for the governance of biotechnology.

Questions from the floor concerned with public reactions to and perceptions of cloning issues, and how far – or not – the “repackaging” of such a contentious subject can alter opinion. All in all, Giuseppe's presentation was another very thought-provoking and successful Science and Society Forum seminar.

As for Giuseppe, the chance to talk to his old peers was a big draw. “It's good to be back, because EMBL is a very special place,” he said. “There are lots of new faces here, of course, but many old ones, too. And it's nice to see that the DNA fountain in the cafeteria finally has water in it.”

Hot off the press

Heads of Units and Group and Team Leaders will be glad to hear that all OIPA's demands for texts, pictures and proofs are over for another few months at least: this year's annual EMBL publications will be coming off the presses in time for the Summer Council Meeting at the beginning of July.

You can pick up printed copies of the Annual Report 2005-2006 and EMBL Research at a Glance 2006-2007 from the OIPA corridor after 5 July, and Outstations will receive copies by mail. The 2005 Research Reports will be on a DVD alongside Facts and Figures 2005 (formerly the Handbook of Statistics), and this is also freely available from OIPA. It will also be distributed inside the back of EMBL Research at a Glance 2006-2007 and the new Annual Report. Thanks for all your help, everyone!



news&events

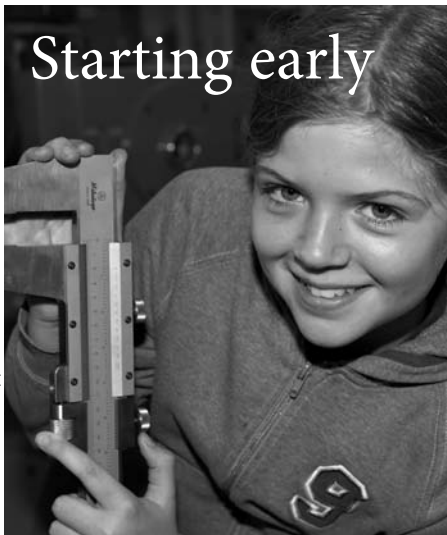


Photo: Marietta Schupp

Starting early

Good grief, the predocs seem to get younger every year, don't they? Ten-year-old Eva Heinzmann joined her father Thomas and his colleagues in EMBL Heidelberg's mechanical workshop for "Girls' Day" on 27 April as part of a national initiative to give schoolgirls a taste of what are thought to be traditionally "male" jobs. Eva, who attends the Realschule in nearby Wiesloch, spent the day working with plexiglass and seeing what the team in the workshop get up to in their unfailing devotion to keeping all EMBL's bits and pieces running smoothly.

"This kind of work is considered a man's job but I think women would be quite good at it because it can be very fiddly," Eva observed. It's early days to have decided on a career path yet, but Eva's day in the workshop certainly gave her food for thought.



Photo: Marietta Schupp

Spring saw two events giving EMBL some hands-on fire-fighting experience. In April, Kinderhaus staff received training sessions with real flaming infernos (and a bit of theory for good measure), conducted by Total Feuerschutz GmbH. In May, representatives of the Forschungszentrum Karlsruhe conducted a similar session for other EMBL staff.

Left: Bernd Simon and Miriam Bortfeld tackle a blaze

We're in safe hands

from the Staff Association

ELECTIONS: Elections for Staff Association representatives have taken place at all five EMBL locations, and new Committee members were elected or re-elected for two-year terms.

On behalf of all staff we would like to thank the outgoing members for their input and help over the past years:

- *Heidelberg:* Imola Balogh
- *Monterotondo:* Mike Spiegel

We'd also like to welcome our new representatives:

- *Heidelberg:* Heidi Snyman
Carlo Carolis
Fabiana Renzi
Janus Jakobsen
Genevieve Reinke
- *EBI:* Sarah Hunter
Bert Overduin
- *Monterotondo:* Pascal te Welcher
Tommaso Nastasi

SUMMER PARTY IN HEIDELBERG: Don't forget to note 22 July in your calendars. The 5th Annual Summer party in Heidelberg for all staff, alumni and their families will start from 1.30pm. The variety of activities for children and adults will surpass even last year's heights! Please remember to have some EMBL identification with you.

If you'd like to sign up for the new EMBL Long Term Care insurance scheme, please visit www.embl.de/staffonly/personnel/longtermcare.html for more details and a registration form. Most staff can benefit from a 50% subsidy for themselves and 25% for their spouses and children.

■ **SET-Routes**, a new programme funded by an EU FP6 Science and Society/Women in Science grant, will soon be looking for female "ambassadors" to spread its message in schools and universities throughout Europe. Coordinated by EMBL, with EMBO and CERN as consortium partners, SET-Routes aims to mobilise women in science, engineering and technology (SET) to provide inspirational role models for young people, encourage women science graduates to pursue further studies and careers in science and help change outdated perceptions. The Start-up Conference will take place next spring. Contact julia.willingale@embl.de or gerlind.wallon@embo.org if you're interested in finding out more.

■ **Science in School** is published by EIROforum and based at EMBL. This new European journal to promote inspiring science teaching is always looking for good science articles. See www.scienceinschool.org or contact Eleanor Hayes at editor@scienceinschool.org.

■ **The German scientific periodical Laborjournal** has recently published a list of Structural Biology's 50 "most cited" in Germany and Switzerland, and Heidelberg's Luis Serrano is the first EMBL entry on the list at number ten. Of EMBL's current faculty, Hamburg's Victor Lamzin also made the list.

■ **Online application** to the EMBL International PhD Programme winter selection 2007 starts on 1 July, and the deadline is 1 November. Interviews will take place from 29 January to 2 February. See www.embl.org/training/phdprogramme/applications.html for details.

■ **New postdocs** are invited to a welcome reception, organised by the Postdoc Association, in the canteen at EMBL Heidelberg on 25 July.

■ **ESOF (Euroscience Open Forum) 2006**, a pan-European General Science Meeting, will be held in Munich at the Forum am Deutschen Museum and the Deutsches Museum from 15–19 July. Researchers from different disciplines, policy-makers, industry representatives, science journalists and the general public are invited to the event, which fosters debate about science and society and stimulates scientific awareness. See www.esof2006.org for more details.

■ **Changes in the DG Office:** Mehrnoosh Rayner, who is responsible for the Alumni Association, can now be found in room V203. Please pay her a visit if you are leaving EMBL to sign up for the association. Her desk in the DG Office is now occupied by Silke Schumacher's PA, Maria Pia Becker.



New EBI Group Leader Paul Bertone completed his PhD at Yale University and joined as a Staff Scientist in 2005. His main research has been the large-scale investigation of transcription and regulation in the human genome, and the development of novel genomic and proteomic microarray technologies. The Bertone Group will focus on developmental genomics, working to characterise the molecular pathways involved in self-renewal, differentiation and lineage commitment in mammalian stem-cell lines.

EMBL Grenoble's latest addition to its faculty is Ramesh Pillai, who takes up his Group Leader position on 1 July. Originally from near Trivandrum, India, Ramesh did his PhD at the University of Bern, Switzerland and his postdoc research at the Friedrich Miescher Institute in Basel. In Grenoble, his group will study the biology and mechanisms by which microRNAs act on their target mRNAs. The role of miRNA-associated protein factors and of sub-cellular structures in this process will be investigated.



Who's new?

Ruth Akhtar (Sequence Database), Paulo Alves (Brunner), Irina Anosova (Sattler), Benoit Ballester (ENSEMBL), Adriano Barbosa Da Silva (Schneider), Maria Pia Becker (DG Office), Alexandra Bezler (Griffiths), Jutta Bulkescher (Ellenberg), Cintia Carella (Nerlov), Guillem Casanovas (Treier), Lazaro Centanin (Wittbrodt), Thomas Conrad (Akhtar), Helen Crowe (EBI Directors' Office), Damien Devos (Russell), Stephen Fitzgerald (ENSEMBL), Anders Friberg (Sattler), Adriana Gambardella (Nerlov), Tanja Georg (Brunner), Raik Grünberg (Serrano), Maximiliano Gabriel Gutierrez (Griffiths), Susanne Hofner-Harris (Szilárd Library), Richard Holland (ENSEMBL), Ni Hong (Wittbrodt), Fu-Chen Hsu (Furlong), Teemu Ikonen (Svergun), Steven Johnsen (Gannon), Nathan Johnson (ENSEMBL), Alexey Kikhney (Svergun), Sandy Knötter (Canteen and Cafeteria), Suman Lata (Weissenhorn), Thomas Laurent (EBI External Services), Vivian Lee (Rebholz), Tobias Maier (Serrano), Ioannis Manolaridis (Tucker), Matthew Marklund (Minichiello), Jenny Martin (EBI Systems), Julia Preu (Tucker), Ines Racke (Gavin), Claudia Remmler (Visitors Programme), Simon Rouane (EBI Database Applications), Adam Round (Svergun), Sandra Ruf (Nédélec), Gaurav Sahni (Macromolecular Structural Database), Sajoscha Sauer (Furlong), Johanna Scheuermann (Müller (Jürg)), Sanchayita Sen (Macromolecular Structural Database), Mahmut Uludag (Rice), Oleg Ursu (Bork), Almer Van der Sloot (Serrano), Glen Van Ginkel (Macromolecular Structural Database), Nora Walls (Safety Office), Paul-Daniel Weeber (Centre for Computational Biology), Lei Zhang (Wilmanns)

events@EMBL

3-6 July Heidelberg

Summer Council Meeting

7 July Heidelberg

Hepcidin and the regulation of systemic iron metabolism. Tomas Ganz, Uni. California, LA

10 July Heidelberg

How many ways through the Golgi maze? Kristian Prydz, University of Oslo

11 July EMBL-EBI Hinxton

2nd HUPO CVI Workshop

12-14 July EMBL-EBI Hinxton

BSPR/EBI Meeting, Integrative Proteomics: Structure, Function, Interaction

22 July Heidelberg

Staff Association Summer Party

13-15 September Hamburg

Faculty Retreat/Heads of Units Meeting/Senior Scientists Meeting

1-4 August Heidelberg

Joint EMBL/Ambion Practical Course on miRNA Profiling

13-22 August Heidelberg

EMBO Practical Course on Cryo-Electron Microscopy and 3-D Image Analysis

26-30 August Heidelberg

7th EMBL Transcription Meeting

28 August-5 September Hamburg

EMBO Practical course on Protein Expression, Purification and Crystallisation (PEPC5)

Who you gonna call? – The Safety Office



Safety staff and their extension numbers (l-r): Nora (8371), Corinna (8272/7761), Mario, Josef (7764) and Robert (7762).

Photo: Maj Britt Hansen

EMBL's a very safe place – statistically speaking, a lot safer than your home – but if something were to happen, the Safety Team is ready and waiting to spring into action.

There are new faces in the Main Lab's Safety Office since Jürgen Beneke and Ludwig Merkel left at the end of March. The Safety Office would like to thank both for their many years of service at EMBL.

Robert Gözl and Nora Walls have joined to support Josef Kröger and Corinna Gorny. Now Josef and Robert together are responsi-

ble for the collection and disposal of biological, chemical and radioactive waste, controlling the isotope labs and checking for contamination, among other things. Robert will also serve as a first aid attendant, and Nora will deal with various administrative matters, including the booking of the teaching lab, as well as issuing radioactivity badges. The team has recently been aided by Mario Charon Alvarez, who leaves at the end of June. Call the extension numbers above or email them at safety@embl.de.

awards&honours

EMBL Ventures' **Jan Adams** has been awarded the prestigious Kauffman Fellowship for Venture Education in the USA. After the admission of his colleague Christof Antz last year, Jan is the third German ever to participate in this US programme for venture capital. He holds a PhD in biochemistry and has worked with EMBL Ventures as an investment manager since June 2002.

EMBL Grenoble and EMBLEM have joined forces to secure a worldwide market for a micro-diffractometer developed by Team Leader **Florent Cipriani**. Alongside a French construction company and a German sales force, the first sale was made to the USA in March and it's hoped that many more will follow.