



The CIBB opens its doors in Grenoble

On January 13 the new Carl-Ivar-Brändén Building (CIBB), adjacent to the EMBL Grenoble Outstation, opened its doors as a new centre of excellence for European structural biology. The building will house research groups from the Partnership for Structural Biology, including the ESRF, ILL and EMBL, as well as the Institut de Virologie Moléculaire et Structurale, associated with the Université Joseph Fourier. The facilities will include a complete pipeline for carrying out high-throughput structural investigations of proteins and other molecules. page 2

Potočnik pays a visit

“A model institution for science in Europe,” was Commissioner Janez Potočnik’s conclusion when he visited EMBL Heidelberg in January. Two projects that the EU Commissioner showed particular interest in were the EMBL International Centre for Advanced Training (EICAT) and the bioinformatics services and databases of the EBI. He called the extensive DNA and protein databases in Hinxton a highlight of molecular biology in Europe and crucial scientific infrastructures that should be promoted in the future. page 3



Weel are ye wordy o’ a grace as lang’s my arm

No, most people in the room didn’t understand a word of it either, but a good time was had anyway at the 2006 Burns night celebration on February 4. Traditional Scottish neeps, tatties and haggis were served up, with George Reid performing the “address to the Haggis” and fellow Scot Iain Mattaj donning his nightshirt for a rendition of “Holy Wullie’s Prayer”, before the assembled throng was treated to some rousing numbers by the Heidelberg & District Pipes and Drums bagpipe band. After dinner everyone got up for a spin around the canteen in the ceilidh.

Want to write for a new science teaching journal?

Do you enjoy communicating science to the public? The end of March will see the publication of *Science in School*, a new European journal presenting the best in current research and teaching, produced by EMBL and other members of the EIROforum. Scientists are invited to contribute; the aim is to help teachers give inspiring lessons and communicate with each other across Europe. Alongside stories about interesting research, projects and interdisciplinary work, the journal will include teaching materials that can be adapted to fit different classroom environments and curricula, news on training opportunities for teachers, and articles about interesting young scientists.

You might like to write about your own research or another scientific field, about how you decided to become a scientist, or about scientists or teachers who particularly influenced you. E-mail the editor (scienceinschool@embl.de) with your ideas.

Science in School is a non-profit activity, part of the NUCLEUS project supported by the European Commission. More information is available at www.scienceinschool.org

Monte's in on the act

The Monterotondo Outstation hosted a major Science and Society event for the first time last year with the EMBL/EMBO/IBC-CNR mini-symposium on Genes and Behaviour on December 9. The programme covered the relationship between genes and behaviour and new analytical methods for assessing disease-risk factors. “It’s very important to be able to bring Science and Society events to the outstations, and we had a full house,” says local organiser Giovanni Frazzetto. “It was a good chance to present EMBL’s Science and Society activities not only to staff from the Outstation but also to a much wider group of participants from the Monterotondo campus.”

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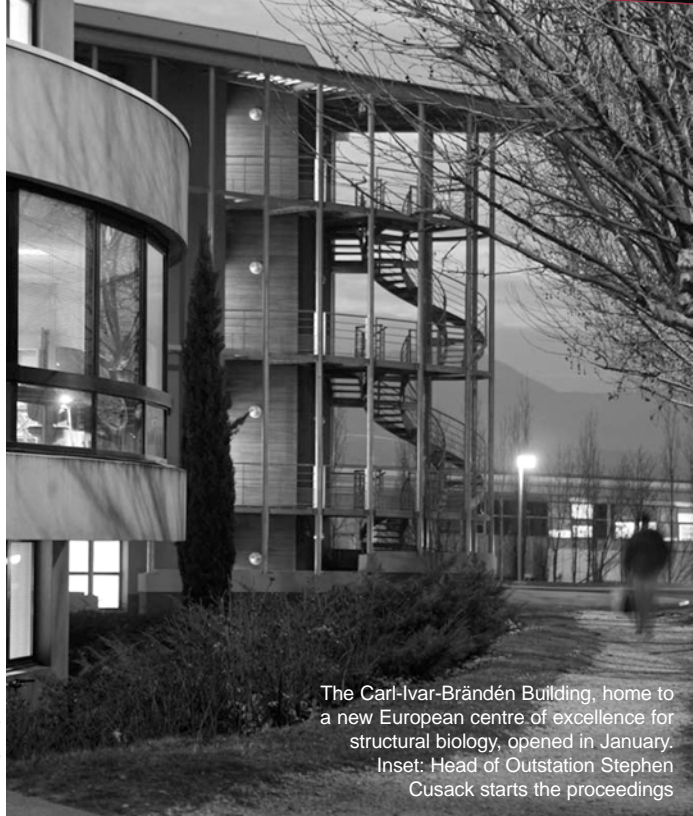
The CIBB opens its doors in Grenoble

In 2002, EMBL, the European Synchrotron Radiation Facility, the Institut Laue-Langevin and the Institut de Biologie Structurale combined their expertise to form the Partnership for Structural Biology (PSB). The project involved building a joint laboratory complex adjacent to the EMBL Grenoble Outstation, the Carl-Ivar-Brändén Building (CIBB), which opened on January 13. The building will also house groups from the Institut de Virologie Moléculaire et Structurale, associated with the Université Joseph Fourier and the CNRS.

Attending the ceremony were the Director of Higher Education at the French Ministry for Research, the Mayor of Grenoble, representatives of the Région Rhône-Alpes, the president of the Université Joseph Fourier, and high-ranking representatives of all PSB partners. Directors General William Stirling (ESRF), Colin Carlile (ILL) and Iain Mattaj presented the new building as a crucial further step in the development of the Grenoble site as a European centre of excellence for structural biology.

“It was natural for the major structural biology institutes in Grenoble to come together in this way to mutually benefit from each other’s technical and scientific expertise,” says Stephen Cusack, Head of EMBL Grenoble. “Between us we have most of the technical platforms required for interdisciplinary structural biology, including some of the world’s most important and unique large-scale facilities.”

The CIBB houses research groups and a complete pipeline for carrying out high-throughput structural investigations of proteins and other molecules. The new laboratories contain robotics for high-throughput protein purification, expression and crystallisation, facilities for isotope labelling, especially deuteration, and instrumentation for nuclear magnetic resonance, mass-spectrometry and cryo-electron microscopy. Assembling all the components of this pipeline in a unique platform under one roof will make the passage from gene to atomic structure more efficient and will greatly speed up the process of investigating important molecules. A particular focus of the scientific work will be understanding the molecular and cellular basis of human diseases.



The Carl-Ivar-Brändén Building, home to a new European centre of excellence for structural biology, opened in January. Inset: Head of Outstation Stephen Cusack starts the proceedings

Photos by Maj Britt Hansen

News from EMBL Centres: CMCI plans take shape with specialist appointment

As recently as ten years ago, the process of using images to visualise biological systems was an entirely different kettle of fish. It involved taking pictures the old-fashioned way with a normal 35mm camera (remember those?) and heading to the darkroom to develop the film, with the results usually only available as static images.

Now, though, advances in several types of technology have taken imaging into a whole new realm. Digital CCD cameras, cheaper computers, better lens architecture and developments in labelling techniques have improved the process, while improvements in computer simulation allow more effective evaluation of results.

These advances have happened so quickly that there’s no protocol or best working practice for using the information that they provide, and no archive set up for the storage and dissemination of what is achieved.

This is where the Centre for Molecular and Cellular Imaging (CMCI) comes in, embarking

on a three-year plan from the beginning of 2006 to promote projects at EMBL on biological imaging at all levels of biological organisation, from the molecule to the organism.

Coordinated by Jan Ellenberg and EMBL-Hamburg’s Matthias Wilmanns, the CMCI has appointed its first full-time staff, postdoc Kota Miura, who has specialised skills in microscopy and image analysis.

Kota will be associated with the Advanced Light Microscopy Facility (ALMF), headed by Rainer Pepperkok, where most of EMBL’s digital microscopy images are generated. He plans to drive activities within the CMCI in several areas of image analysis of light microscopy data:

- training and consulting on image processing and analysis, including basic tutorials for beginners and seminars for advanced users. Seminars are intended to serve as a scientific exchange forum to bring together EMBL scientists with shared interests at different levels and to promote collaborations that aim to

bridge resolution gaps, either by systematically combining different imaging approaches or by developing novel methods;

- research collaborations with groups in EMBL to develop new image processing tools;
- software integration and development, including assembling and disseminating state-of-the-art image processing software, making image analysis tools developed in individual groups accessible to all EMBL scientists and establishing a web-based information resource on imaging at EMBL.

EMBL Centres are formed according to the changing needs of the EMBL research community as cross-departmental structures to promote innovative research projects across disciplines.

For more information about image processing within the CMCI, e-mail Kota at miura@embl.de. Further details will soon be available on the website, which is currently under construction.

Three new groups strengthen research/medicine links

The beginning of 2006 saw the official addition of three new groups to the Molecular Medicine Partnership Unit (MMPU). They are:

- Carsten Schultz and Marcus Mall studying cystic fibrosis;
- Peer Bork and Magnus von Knebel-Doerberitz looking at the identification of cancer markers;
- Matthias Hentze and Martina Muckenthaler studying mammalian degenerative diseases due to defects in iron metabolism.

The “pilot” phase of the project tested the feasibility of such a novel partnership, in which groups are jointly led by two principal investigators – a basic researcher from EMBL and a medical researcher from the Medical Faculty of the University of Heidelberg – with the aim to pursue basic research projects that are related to medicine. The first group was that of MMPU founders Andreas Kulozik from the Medical Faculty and EMBL Heidelberg’s Matthias Hentze, who established the Partnership in 2002 and work together on diseases of RNA metabolism.

Their success, producing valuable new insights into the mechanisms underlying some of the most common human genetic diseases, has opened the way to the second phase of the project. This will serve as a springboard for several new research areas with the appointment of the three additional groups, all of

which fit the model of joint leadership from both institutions.

“The new groups have been chosen as a result of their interest in the ongoing convergence of biology and medicine – the types of research carried out at EMBL and in the clinical setting at the Medical Faculty,” says Matthias. “They also fit the criteria established when the MMPU was created: they have joint leadership from EMBL and the university, with the two leaders having a collaborative history, complementary expertise and a project that is sustainable.”

Carsten Schultz’s background in medicinal chemistry and his interest in cystic fibrosis had already led to an involvement with the University of Heidelberg’s Cystic Fibrosis Centre. The arrival there of Marcus Mall, a physician scientist with a longstanding interest in cystic fibrosis pathogenesis, offered an obvious opportunity for collaboration.

“Until then, the Cystic Fibrosis Centre focused predominantly on clinical issues, but then Marcus arrived with the first well-functioning mouse model for the disease,” Carsten says. “This provided a new opportunity: my group had already synthesised several compounds that looked promising in cell experiments, and now they could be examined *in vivo*. As well as this, we aim to define and validate future cystic fibrosis drug targets. If successful, we will be able to significantly

strengthen research on the disease in Heidelberg.”

Carsten and Marcus have just hired the first dedicated MMPU PhD student to work on the project. “Joining the MMPU offers a great opportunity to follow a line of research that we might not otherwise be able to,” Carsten says. “It’s an excellent initiative enabling a fusion of chemical biology, cell biology and physiology, a rare opportunity. In the future, it would also be beneficial to add a focus on microbiology.”

As well as working on their individual projects, the new groups will be involved in the MMPU as a whole, getting together to organise seminars, mini-symposia and teaching activities. In the longer term, it is hoped that the groups will move in together on the Neuenheimer Feld campus in Heidelberg, rather than remaining split between different locations. As well as the expansion, the second phase also aims to increase postgraduate training.

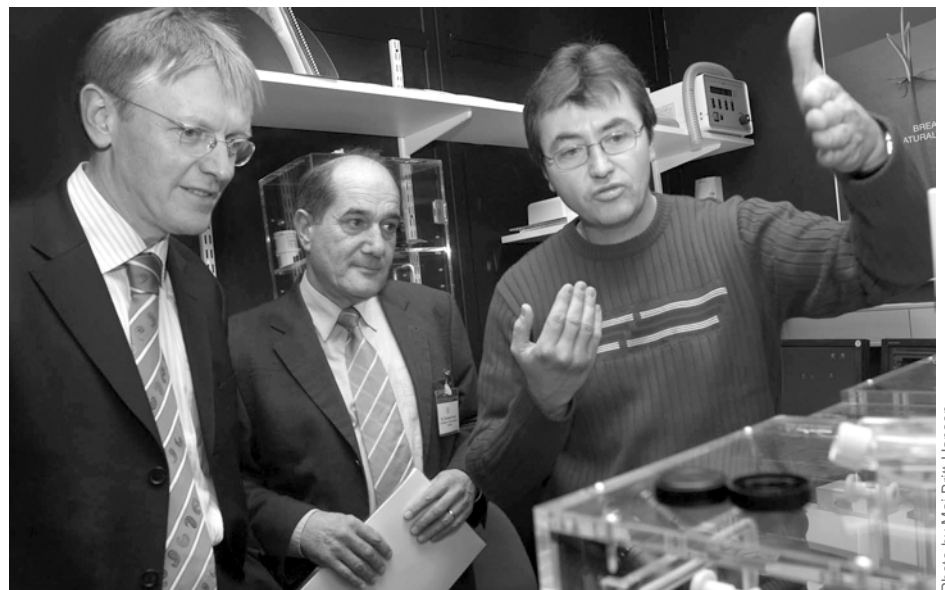
As for the future of the MMPU, Matthias is positive that the partnership will continue to expand and provide some sterling insights into both basic research and the clinical field. “Membership of the MMPU has many benefits, both for the basic and medical researchers involved and for the project as a whole. I see no reason why it could not expand to the size of one of EMBL’s other Units if the MMPU success story continues.”

EU Commissioner for Research visits EMBL

Admittedly, Janez Potočnik’s visit to EMBL didn’t exactly get off to the smoothest start. After his driver almost missed the EU Commissioner for Research at Frankfurt Airport, he made it to the main Lab only just in time for the beginning of the day’s schedule of events. Luckily, what he heard and saw at EMBL during his stay on January 16 made up for the bumpy start.

To set the scene, Iain Mattaj introduced EMBL and its latest research and developments. Two projects in which the EU Commissioner showed particular interest were the EMBL International Centre for Advanced Training (EICAT) and the bioinformatics services and databases of the EBI. Following a presentation by Janet Thornton, the Director of the EBI, he called the extensive databases in Hinxton a highlight of molecular biology in Europe and a piece of crucial scientific infrastructure that should be promoted in the future.

Later, the EU Commissioner got a first-hand impression of research in molecular biology during a tour of some of EMBL’s core facilities. After Rainer Pepperkok explained the cutting-edge technology and the services offered by the



Rainer Pepperkok explains the ALMF to Janez Potočnik (left) while Christian Boulin looks on

Advanced Light Microscopy Facility, Vladimir Benes introduced the subtleties of DNA sequencing and analysis in the Genomics core facility.

EMBL left a very favourable impression. It is

“a model institution for science in Europe,” Commissioner Potočnik summarised, adding that he hoped EMBL’s exceptionally high participation in EU research projects would continue in the future.

Making life easier for crystallographers

It's mid-term for the BIOXHIT project, and crystallographers from Hamburg, Grenoble and synchrotrons across Europe have plenty to show for it. The project has moved fast in the past two years, since the EU gave €10 million to a consortium headed by Victor Lamzin of the Hamburg Outstation; the goal was to develop a state-of-the-art technology platform for the high-throughput handling and analysis of protein crystals at synchrotron beamlines.

On January 18 and 19, over 90 BIOXHITers met at the ESRF in Grenoble to discuss progress and upcoming milestones. The meeting started with a microsposium on Structural Genomics highlighting a great deal of effort from the JCSG, SPINE and 3D-Repertoire consortia. This followed a series of BIOXHIT highlight presentations introduced by Manfred Weiss, who's heading the research within the project. Alongside speakers from EMBL's two structural biology outstations, Kim Henrick from the EBI was on hand to talk about advances in automating the tracking of samples and experimental data.

Precisely how is BIOXHIT making life easier for crystallographers? Until recently, every synchrotron facility around the world was developing custom solutions for handling and carrying out experiments on fragile macromolecular crystals. This means that a user is faced with a different environment at every beamline he or she visits. The situation is completely changing now. Joint efforts are underway in Grenoble, Hamburg and many other locations to design and build robotic devices for automated sample handling that mount crystals in the beam. Users would love to see those standard user front-ends installed at all the European sites. These are just a few examples. Within BIOXHIT, for the first time in their his-

tory, all European synchrotrons, as well as leading software and hardware developers in the field, are working together to achieve common goals.

One of the challenges in structural biology, especially for young researchers, has been deciding whether a particular experiment is successful and whether the measured data are good enough to lead to a structure. "Usually this involves quite a bit of human expertise, and that means a considerable expense of time," Victor says. "In some cases users have gone home, struggled with the data, and weeks later discovered that they couldn't be used. Within the frame of BIOXHIT, Santosh Panjekar, Paul Tucker and some of the rest of us have developed Auto-Rickshaw. This software platform emulates what an experienced structural biologist would do when inspecting the data. Auto-Rickshaw provides an alert calling 'Ready! Next sample please!' or allows one to make any changes to the experiments that are necessary to get usable data while the crystals are still on the beamline."

Other projects include the analysis of how X-rays damage the samples, the use of intelligent software to scan samples for useful crystals and the continuing development of ARP/wARP, the extremely successful structure-building software from Victor's team. The ultimate goal, he says, is to make crystallography as easy, quick and efficient as possible for all users across Europe. Eventually it will be standard practice for scientists to mail in crystals and carry out the work from the comfort of their own labs, which is the motivation behind another effort to simplify and standardise internet interfaces to structural biology tools.

Speaking in tongues

PRIDE, the PRoteomics IDentification database, has extended its service by releasing a multilingual user interface.

A standards-compliant public data repository for proteomics data, PRIDE was developed to provide the proteomics community with a repository for protein and peptide identifications, together with the evidence supporting these identifications.

The multilingual user interface uses the local settings on users' web browsers to automatically select the correct language, and is currently available in English, Korean, French and German. A Chinese translation is being developed and will be available later in 2006.

It's all thanks to volunteer translators including Sang Yun Cho, a visitor to the EBI from the Yonsei Proteome Research Center (YPRC) in Seoul, Korea, who originally suggested the idea of the multilingual interface. PRIDE is primarily a submission-based database, allowing proteomics laboratories to publish the details of their data alongside their journal submissions, and there's increasing interest from the global proteomics community, with ever more labs wishing to submit and retrieve data.

Learn more about PRIDE, including how to prepare submissions and search the database at www.ebi.ac.uk/pride (in the language of your choice, of course!).

Technology transfer talks on the agenda



L-r (after Iain): Bruno Jarry, Florence Lazard, Pierre Bey, President of the Board Claude Huriet, Daniel Louvard, Jean-Paul Thiery and Anne Bellod of the Institut Curie on their visit to EMBL on February 2. They came to discuss a Technology Transfer partnership with EMBLEM and were given a tour of the core facilities and introduced to some EMBL projects. Photo: Maj Britt Hansen

Office training days

Want to brush up your Office skills? IT Services has organised some training days for Microsoft programs starting at the main Lab in March, which are open to everyone from all EMBL sites. The price per day is €90, plus €20 for training materials (e.g. two days' training is €200). Sign up with Jorma at tapola@embl.de at least three weeks before the start of the course you wish to join. *Courses in English:* Outlook (March 29), Excel (April 10–11), Access (April 24–25), PowerPoint (May 26). *Courses in German:* Word (April 20), PowerPoint (April 21), Excel (April 27–28), Access (May 15–16), Outlook (May 22).

from the Staff Association

Get your diaries out: this year's not-to-be-missed event, the Staff Association Summer Party 2006, will take place on **Saturday, July 22**. So now you can plan your summer holidays.



Developing professional skills

Educating the next generation of scientists is the responsibility of group leaders, research labs, universities and research organisations. For the most part, the approach used until now has been restricted to teaching science often to the exclusion of the “parallel or professional skills” which are equally important in the pursuit of a successful scientific career.

The modern-day scientist has a multitude of career options to choose from. Academic careers, jobs in industrial research and production as well as science writing and administration all require skills in addition to the basic scientific knowledge taught within the usual curricula.

That there is something amiss in the current approach has been pointed out in meetings organised by the HFSP in conjunction with the ESF (“Towards a new paradigm for education, training and career paths in the natural sciences”, 2001, www.hfsp.org) and EMBO

(“Careers in the life sciences”, 2001, www.embo.org).

Perhaps the most important parallel skill is the ability to lead and inspire a group of co-workers. It is vital that group leaders are able to provide a supportive environment that allows their students and postdocs to perform to the best of their abilities. To a certain extent this can be learned, and many organisations train their employees to become better leaders and managers. Although the term “management” may not be very popular with scientists, the lack of good management skills can often have negative implications.

“Perhaps the most important parallel skill is the ability to lead and inspire a group of co-workers”

Lack of support for developing management skills means that most scientists in academia are forced to learn on the job. Young group leaders, who are starting their projects, writing grants and recruiting personnel, also have to learn how to manage their labs. The monetary costs associated with bad management most likely outweigh by far any investment in training, not to mention any personnel costs. This

realisation has led a small number of organisations (e.g. HHMI, MRC and EMBO) to offer management courses to young group leaders.

Mastering the skill of presenting results both orally and in written form is another requirement for any successful group leader. Again, students are left mostly alone to learn how to do this. Many institutes and universities are now recognising that formal and organised support does not have to be costly. EMBO, for example, offers annual training to PhD students through its Young Investigator Programme (YIP).

Finally, scientists are realising that being skilled in the ability to communicate research well to the public and the media can also have implications on their continued funding. The days of the ivory towers are past. Scientists have to learn to communicate with the public in a way that the public understands. EMBO’s Media Workshops (organised through its Science and Society programme for EMBO fellows, members, YIPs and EMBL staff) offer scientists practical ways of doing this.

In our changing world, research organisations like EMBO and EMBL have the obligation to provide the best training to young scientists. This often involves looking beyond the scientist to find ways of nurturing and supporting the skilled individual.

– Gerlind Wallon

www.embo.org/yip

www.embo.org/scisoc

Yeast proteins yield their secrets as 3D Repertoire participants gather

If we knew the makeup, locations and functions of every protein complex in a model organism such as yeast, we’d be well on our way to understanding how the relatives of these molecules function in our own cells. That would be crucial information in making headway on both basic biological questions and the processes that lead to disease. It’s the subject of a major integrated project called 3D Repertoire, coordinated by Luis Serrano at EMBL Heidelberg, which aims to determine the structures of key molecular machines in yeast.

The project had its first annual meeting on January 17–18 at the ESRF in Grenoble. Representatives of the 14 institutes and private companies involved in 3D Repertoire met to discuss their progress.

“The consensus of the meeting was that this is absolutely the right time to be taking on such a project,” Luis says. “Imaging technologies such as cryo-electron microscopy and EM tomography are starting to reveal new details of molecular machines.”

Those methods can now be supplemented with information such as the whole yeast proteome survey, completed by Cellzome and EMBL groups. The participants are also draw-

ing on new biocomputing methods to figure out how to place high-resolution structures of molecules into the complexes visualised by EM and other methods, which is the aim of Rob Russell and Bettina Böttcher’s work. A lot of this has been made possible by the TAP-tag method developed by Bertrand Séraphin and his group while at EMBL, which has permitted the isolation of many of the complexes in the first place.

3D Repertoire is funded by the European Commission under Framework Programme 6, and is Europe’s first large-scale project analysing multiple protein complex structures in yeast.

Participants from EMBL at the ESRF meeting included most of the groups in EMBL’s Structural and Computational Biology Unit, as well as teams from the Hamburg and Grenoble Outstations.

Principal Investigators involved in the project gave overviews of the sub-projects and work packages within which their groups are working. Demonstrations of the work flow registration database and its user interface were also provided by members of Anastassis Perrakis’s group at the NKI. “Significant to the project will be the marriage between the work

database and the complexes website,” says Science Coordinator Phil Irving. “Figuring out the structure of complexes requires an elaborate workflow in which many groups may participate; setting targets and checking the progress of the other groups will depend on these types of tools, particularly because the work is being done across our very broad consortium.”

“These reports were particularly interesting because the project is highly interdisciplinary and people are bringing together methods in new ways to tackle a common problem,” Luis says. “It’s a very creative approach.”

On the second day of the meeting, representatives from the EU reviewed the project while Scientific Advisory Board members provided input into future directions the work should take, based around the implementation plan presented by Luis. The project continues to evolve: for example, EMBL’s newest Group Leader, Anne-Claude Gavin, an expert in yeast proteomics, will be joining the project.

“We hope the remaining 3.5 years of the project’s life will provide the basis to go for something even more challenging,” Luis says. “Ultimately we would like to obtain the structure of an entire cell at atomic resolution.”

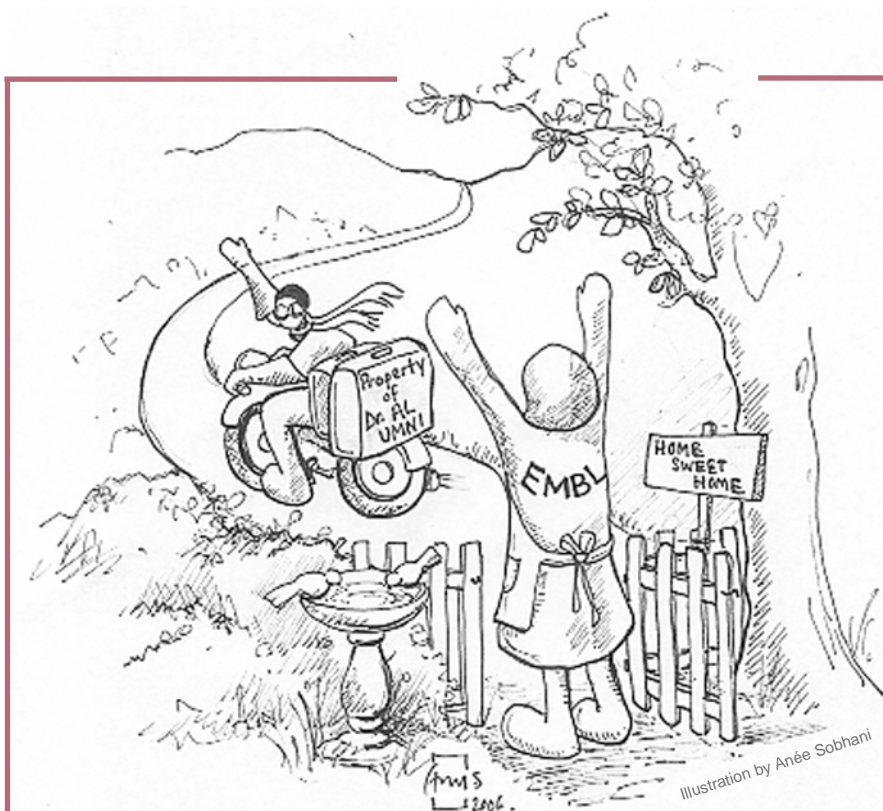
Forget-me-not!

For all of us here at EMBL, the day will come when we have to leave. No matter where we choose to go and what we decide to do, however, we will all become EMBL alumni. This column is designed to inform you – both current EMBL staff and EMBL alumni – of the services the Alumni Association offers and plans to offer during and after your stay at EMBL. It will also tell you why EMBL needs an Alumni Association, and look at the challenges facing those of us who are about to leave as well as those long gone.

So watch this space, and please contact us if you're about to leave, or register online if you have left already. We look forward to hearing from you.

– Mehrnoosh Rayner (alumni@embl.de)

Register with the Alumni Association today at www.embl.org/aboutus/alumni/register.html



“Good luck, and keep in touch!”

Of mice and maths: Olivier makes the leap

What has *Mus musculus* got to do with mathematics? More than you would think, as PhD student Olivier Mirabeau had to find out fast when he embarked on his project three years ago.

Originally an engineer, Olivier is one of an increasing number of students and researchers who are finding that the demand for interdisciplinarity in biology is allowing them to branch out into other areas while maintaining a connection with previously studied fields.

Olivier originally joined Nadia Rosenthal's group in Monterotondo in 2002 and found his niche in the Gross lab, which is concerned with regulation of anxiety behaviour using the mouse model. He brought along a background in applied mathematics, but soon found himself at the bench doing wet chemistry in his pursuit of new peptide hormones and neuropeptides in human genomic sequences. An algorithm identifying uncharacterised proteins allowed him to generate a shortlist of candidates from public database sequences and then to study the putative secretion and processing of those candidate peptides *in vitro*. The preliminary data he got is very promising, and he's due to finish his PhD in the spring.

“It was pretty difficult at first to go from one field to the other; it's easy to keep repeating the same mistakes,” Olivier observes. “I was lucky to get helpful people interested in what I was doing, particularly Ewan Birney from the EBI. To go from maths and physics, and more

specifically bioinformatics, to what is essentially a mouse lab was a big jump.”

Such unusual profiles of incoming researchers are becoming ever more common, with systems biology in particular needing input from maths and chemistry. In the next few years EMBL is planning to concentrate on expanding in such crossover disciplines to enhance basic research. Collaborations such as the Molecular Medicine Partnership Unit and the aim towards increased investment in chemical biology have already started to make a difference to the methods used at EMBL.

Additionally, being based in Monterotondo means that Olivier is far from the main Lab, where he would have found himself among many other bioinformaticians. “There are some others here at the Outstation following multidisciplinary projects, but they're mostly medical doctors or chemists,” he says. “Though there's a greater concentration of scientists from other fields at EMBL Heidelberg than here, I haven't had a problem learning what I need to know and finding possibilities for collaboration.”

Has his experience in Monterotondo converted Olivier to biology? “I'm fundamentally still interested in problem solving – a mathematician and physicist at heart,” he says. On the brink of his next career move, he's not sure what the future holds, but the immersion in a different field has been enlightening on both sides.

Forum looks forward

Funding for the Heidelberg Forum – Biosciences and Society is assured for another four years with the generous sponsorship of MLP founder Manfred Lautenschläger. The Forum is an initiative launched in 2001 by four leading research institutions in Heidelberg: EMBL, the German Cancer Research Centre (DKFZ), the Centre for Molecular Biology (ZMBH) and the Medical Faculty of the University of Heidelberg. It consists of a series of lectures to promote public understanding of science; past speakers have included Nobel Prize winner Christiane Nüsslein-Volhard and former Max Planck Society President Hubert Markl.

Thanks to financial support from the Lautenschläger Foundation, a well-known philanthropic institution in the region, the Forum's programme of events for the next few months is already underway. The next talk will be on March 7 at 18.00 at the Print Media Academy, when Jürgen Mittelstrass from the University of Constance will talk about “Bioethics and Human Dignity”. Sir Alec Jeffreys from the University of Leicester will then be the guest lecturer on May 12, with a talk about “Genetic Fingerprinting and Beyond”, this time at the Kirchhoff Institute in Neuenheimer Feld. For more information, visit www.embl-heidelberg.de/aboutus/sciencesociety/hdforum.html

Dear EMBL,

I have spent three very intense but beautiful months at EMBL: rainy August, warm, sunny October and cold January. Like Janez Potočnik, European Commissioner for Science and Research, I come from Slovenia, a small EU country maybe not so well known to you, and from the biggest Slovene research institute – the Jozef Stefan Institute – named after the distinguished 19th century physicist. I am sure you still remember learning the Stefan-Boltzmann law in thermodynamics classes.

My field of research is cell biology and biochemistry of immune cells. I was sent here not to do a PhD or to be a postdoc, but by my institute and with the support of an EMBO short-term fellowship to cut sugar cryo-sections of cells. To be exact, to bring back a method which would allow us to see very precisely within the cells while being able to preserve cell proteins in a way that they would remain recognisable to specific antibodies that we produce in the biochemistry department. Not an easy task at all, because preserving “nice” cell morphology means using some very nasty chemicals which change cell proteins in a way that they often lose their characteristics for probes like antibodies to find them.

I studied dendritic cells, which circulate through our tissues like veiled scavengers searching for “dangerous” foreign proteins. To be able to see within the inner space of a dendritic cell I first fixed them – freezing them in one exact moment of their lifes-

pan. Then I fed them with sugar to protect them from osmotic stress, and finally I spilt liquid nitrogen on them and cut them at minus 120 degrees Celsius. All that made tiny silver sugar sections of their bodies. I coloured them with dangerous uranyl acetate for contrast and decorated them with specific antibodies and gold particles to see where important proteins (cell enzymes and their endogenous inhibitors) resided.

Every time I looked at them under the electron microscope I was amazed that, even after all this rough treatment, they are filled with organelles and membranes, meaning the biochemical processes within them are really intense. How could they not be, since every potentially dangerous molecule taken up by a dendritic cell is degraded into small pieces, upon which a decision is made in a body whether an immune response should happen or not.

Many thanks to the people of the Griffiths and Antony Groups, the EM Core Facility and to the NMR members of the Sattler Group, who shared their labs with me and from whom I have learned all these things. Let me finish with an idea very well known to everyone involved in research and science:

There always something will remain, that we shall not know, why? (*Jozef Stefan, The Science of Nature Trials, 1859*)

Tina Zavasnik-Bergant

news&events

■ **EMBL's Swiss contingent** joined forces to welcome some of their countrymen on a visit to the main Lab on January 11. Cesar Dubler, Pierre Berlincourt and Christian Engler of the Swiss Embassy and Generalkonsul Josef Renggli heard talks about EMBL as a whole, the core facilities and the PhD Programme; Damian Brunner, Elisa Izzauralde, Andy Hoenger and Michael Knop then introduced EMBL's science.

■ **When worlds collide:** 60 participants of the International Chemical and Physical Olympiad visited EMBL on December 16. The Olympiad competitions cover all fields of science and aim to develop the interest of youngsters and promote international relations. The students visited EMBL labs that have strong links to chemistry and physics.

■ **An “Alternative transcript diversity** symposium II – Biology and Therapeutics” will be held at EMBL Heidelberg on March 21–23. The realisation that alternative splicing is an important way of controlling gene expression has spawned several large-scale efforts to create bioinformatics resources on alternate transcripts and protein isoforms. These efforts require community-based collaborations involving bioinformaticians, computational and experimental biologists, and pharmaceutical researchers. This symposium aims to bring together this community to discuss these resources. The event registration and abstract submission deadline is March 1. See www.ebi.ac.uk/information/events/atd-sympo for details.

■ **Registration for the 7th EMBL/EMBO Joint Conference, “Genes, brain/mind and behaviour”,** to be held on November 3–4 at EMBL Heidelberg, is open now. Go to <http://www.embl-heidelberg.de/aboutus/sciencesociety/conferences/2006/scope06.html>

■ **The Center for Modelling and Simulation in the Biosciences (BIOMS) in Heidelberg** is offering positions for postgraduate scientists working in cell biology. The focus of research projects should be quantitative aspects of molecular biology, for example modelling functional modules in hierarchically organised biological systems. Positions will be granted for at least one year, at most three years. The current application deadline is June 30. For more information see <http://www.bioms.de/postdoc.shtml>

■ **Many thanks to Mustafa and his team** for sprucing up the Operon; it has a new colour scheme, a new floor and has been given a thorough clean. Mustafa would also like to remind drivers to use the parking garages (don't forget the new one, too) and to leave the roadways around EMBL free for the snow ploughs.



Crystallography course draws the best

Victor Lamzin, Alexander Popov, Andrea Schmidt, Paul Tucker and Manfred Weiss headed the latest in a series of macromolecular crystallography practical courses, “Training in methods for macromolecular crystallography: “M2M: From Measurement to Model”” at the Hamburg Unit in November 2005. Out of 140 applications, the top 20 were selected to receive advanced training in the essential steps in determining biological structures. The course included beamline practicals and lectures, sample handling and experimentation, computational tutorials and in-depth discussions. The M2M course was first established at Hamburg in 1993, and since then many of the leading figures in macromolecular crystallography have participated, and many more researchers have benefitted from the state-of-the-art training. The next course will be held in 2007; check the EMBL web pages.



The new Coordinating Manager for the EMBL International Centre for Advanced Training (EICAT), **Matthias Haury**, studied biology in Freiburg, the University of Alabama and the Pasteur Institute in Paris, completing a postdoc in San Francisco. For the past four years he has been in the Directorate of the Gulbenkian Institute of Science in Oeiras, Portugal, while leading a research group on the interface of immunology and neurobiology and participating as invited Professor in the teaching activities at the University of Lisbon Medical School.

The Office of Information and Public Affairs (OIPA) in Heidelberg has a new group leader, **Lena Raditsch**. Originally from Bonn, Lena studied physiology and molecular genetics at Heidelberg University before completing her postgraduate studies in public relations. During the past ten years she has had various communications positions in the life science sector, and as a PR officer she has covered a broad range of activities including media relations, journalism and editing scientific publications. Most recently she has been working as a self-employed PR consultant.



The new person to contact about press issues is **Anna-Lynn Wegener**, who has come to EMBL straight from a three-month internship in the Public Affairs department of the European Southern Observatory (ESO) in Garching. Anna-Lynn is also from Bonn and studied natural sciences and science communication at the universities of Cambridge and Bath. She has also worked at BBC Wildlife Magazine, the Society of Endocrinology in Bristol and the Max Planck Institute for Neurology and Neuropsychology in Leipzig.

Who's new?

Kathryn Frances Beal (ENSEMBL), Hugo Berube (Arendt), Sascha Blätzel (Mechanical Engineering), Miriam Bortfeld (Ladurner), Lifu Gao (Hermes/Tucker), Renato Golin (Sequence Database), Erhard Haas (Security Service), Rachel Huntley (Sequence Database), Pascal Kahlem (ENSEMBL), Stefan Leicht (Proteomic Core Facility), David Liebl Griffiths), Melissa Little (Rosenthal), Adrian Neal (Schultz), Nikolay Nikolov (EBI Proteomics Services), Brian Petersen (LAR), Gianpiero Previtali (Hamburg IT), Rajesh Radhakrishnan (EBI Database Applications), Miriam Reiß (Griffiths), Judith Risse (EBI Proteomics Services), Annette Schmidt (Neumann), Daniel Schober (Microarray), Anne-Katrin Schuh (Social Services), Antje Seeck (Courses and Conferences), Kerry Smith (Sequence Database), Damiano Somenzi (Rebholz), Annabel Todd (Regulation), Virginie Vaultier (Grenoble Lab Service), Anna-Lynn Wegener (Office of Information and Public Affairs), Gerd Wellenreuther (Meyer-Klaucke)

events@EMBL

20-23 February, 2006

EMBL Heidelberg

Joint EMBL/Agilent Technologies Practical Course: Array-based Comparative Genomic Hybridisation (aCGH)

27 February-4 March, 2006

EMBL Heidelberg

EMBO Practical Course: Chromatin Immunoprecipitation

9 March, 2006

EMBL Heidelberg, Distinguished Visitor

DEP domains in signalling proteins
Jeremy Thorner, UC Berkeley, CA, USA

22 March, 2006

EMBL Heidelberg

Extraordinary Council Meeting

23 March, 2006

EMBL Heidelberg

Science and Society: Socially responsible investments – minds that care, money that matters
Susanne Stormer, Novo Nordisk, Denmark

27-28 March, 2006

EMBL Heidelberg

European Schools Science Symposium (ESSS)

28 March, 2006

EMBL Heidelberg

Welcome reception for new postdocs

4-5 April, 2006

EBI, Hinxton

Heads of Units/Senior Scientists Meetings

5-8 April

EMBL Heidelberg

Second Annual BioMalPar Conference

11 April, 2006

EMBL Heidelberg, Distinguished Visitor

Beyond the Double Helix: Reading and Writing the Histone Code

David Allis, Rockefeller University, NY, USA



Musicians wanted...

If you play an instrument and would like to round off your working week making kids happy, get in touch with Eva Puhm at the Kinderhaus. Every Friday all the children and teachers get together for a bit of a sing-song, and Eva's keen to get more instruments involved. "Even the babies join in and enjoy the songs, and the older ones have a dance," she says. E-mail Eva or music@embl.de.

Voluntary long-term care insurance now available

You can now sign up for EMBL's new long-term care insurance. You do not need to undergo a medical examination if a minimum of 100 members of staff and their dependents sign up before August 31, 2006. Premium rates are age and gender dependent, so signing up now may be to your advantage to avoid a higher premium rate if your birthday is coming up. Other points to note:

- You will obtain a 50% subsidy from EMBL (25% for your dependent spouse and children) towards your premium (subject to final approval from EMBL Council in March or July this year);
- there is no waiting period, and coverage is worldwide;
- the insurance can be continued after leaving EMBL.

Registration forms, a copy of the contract with Insurance company Gothaer and the premium rates are available at www.embl.org/staffonly/personnel/longtermcare.html