EMBL &cetera

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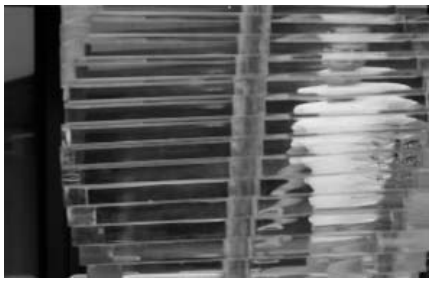
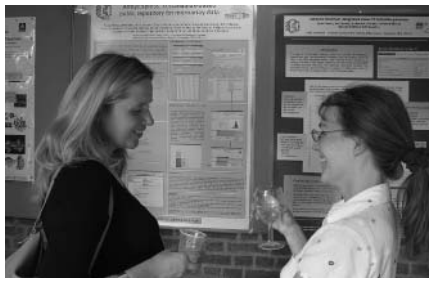
Newsletter of the European Molecular Biology Laboratory

EMBL-Hamburg celebrates 30 years ...page 2



the disappearing helix ...page 6



at your service at the EBI ...page 4

30 years of structural biology in Hamburg

The Hamburg Outstation celebrated its 30th anniversary with a conference entitled "Structural Biology at Crossroads: From Biological Molecules to Biological Systems." The meeting included talks by Ken Holmes, the first scientist to use synchrotron radiation in the analysis of protein structures (which happened in Hamburg), Keith Wilson (former Head of the Outstation) and many others.

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Branco Weiss fellowship goes to EMBL alumnus

Giovanni Frazzetto, former EMBL PhD student, is one of three recipients of the 2004 "Society in Science – Branco Weiss Fellowship." Founded in 2002, this fellowship program is funded by Swiss entrepreneur Branco Weiss and coordinated by the ETH Zurich. Giovanni is the second EMBL PhD student to receive the Branco Weiss award. Last year the fellowship was awarded to Giuseppe Testa, also a former member of the EMBL Science and Society Committee.

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The curious incident of the disappearing helix

If you have ever gone for a coffee in EMBL-Heidelberg's cafeteria you're sure to have noticed a helix sculpture rising from a black stone base in the center of the courtyard. Then again, maybe you haven't. Today, for example, all you can see is a metal pipe sticking out of the ground. It's kind of a magic trick: one month the sculpture is there; the next – *poof!* – it simply disappears. Have you been working too hard? Do you need new glasses? Not to worry – EMBL&*cetera* has tracked down the answer to this mysterious behavior.

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EMBL students hit the road in Finland

Last year, a group of friendly Finnish predocs attended the 4th EMBL Predoc Symposium and then extended an invitation for a group of EMBL's predocs to visit the first ever Finnish Predoc Symposium: "Interactions and Networks in Biology."

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Time and Aging to take center stage at EMBL

New knowledge and technologies growing out of biological research on processes of aging are likely to have monumental impact on the quality (and possibly the length) of the human lifespan in future societies. The topic is one of interest not only for specialized researchers, but also for society at large, and is the theme of this year's EMBL/EMBO joint conference on Society and Society. "Time and Aging: Mechanisms and Meanings" will take place at EMBL Heidelberg on November 5-6, 2004.

an invitation to all staff

Dear Colleagues,

We warmly invite you to our joint celebration of EMBO, EMBC and EMBL getting older together. In fact it is 40, 35, and 30 years respectively since the formation of our sister organizations.

We have reserved the Rosengarten in Mannheim for Monday 15th November 2004 for a celebratory series of talks and music followed by a dinner reception for all. We will begin at 3 pm.

For planning purposes it is essential for us to know how many people will come to the celebration so please let us know by email before October 15, 2004 if you will be able to participate and whether you will be accompanied by your partner.

Kindly respond to anniversaries@embl.de or register online at www.embl.de/conferences/Anniversaries/

We hope to see you all together with your partners soon.

Fotis Kafatos and Frank Gannon

in this issue...

EMBL-Hamburg celebrates 30 years of structural biology

Margaret looked happy and slightly exhausted. Happy because so many former colleagues came to Hamburg to celebrate the Outstation's 30th anniversary with a conference entitled "Structural Biology at Crossroads: From Biological Molecules to Biological Systems." Exhausted because she had spent many weeks preparing for the big event. Earlier in the week several other meetings of the EC-funded SPINE network had taken place as well as a scientific review of the proposed beamlines for PETRA III, a storage ring which will soon be converted into a dedicated synchrotron radiation facility.

The history of the Outstation is also the history of using synchrotron radiation for studying biological molecules. Ken Holmes opened with a talk on his lifetime occupation, the dissection of the function of muscle. He pioneered the use of X-rays and started the initiative at DESY to use synchrotron radiation which has a much higher intensity than radiation used before and was therefore thought to be unsuitable for fragile biological samples. Gerd Rosenbaum explained the intricacies involved in building the first beamline and overcoming the challenge of "frying" samples. Keith Wilson, the former Head of the Outstation, talked about the breakthroughs that were made while he was in Hamburg.

In the old days biologists who wanted to use synchrotron radiation for their research had to work in parasitic mode: wait until a beamline usually used by physicists became available and use it for as long as possible – which often was not long at all because the beam was unstable or shut down altogether for maintenance.

The first dedicated beamline was built in 1971 and was sold to EMBL in 1974 when the Max-Planck Institute decided that EMBL as an international organization was better suited to build and operate a beamline for biologists. Though the major breakthroughs were made in the early 1970s, the field continues to develop. Heinrich Stuhrmann presented his work that showed how soft X-rays could be used for biological samples in the future. Zbigniew Dauter closed the session with a humorous presentation on the importance of phasing that quickly led to a recollection of the many parties held at "Lütt Döns," an off-campus bar that served very good "soaking reagents." The bar ended up in the acknowledgements of a *Nature* paper, which speaks for itself.

The conference provided a showcase for present and future opportunities in structural biology, ranging from the state-of-the-art applications of high resolution methods to imaging methods such as electron tomography. For instance, David Stuart reported on the first diffraction pattern of a baculovirus crystal frozen into a loop. Wolfgang Baumeister took the audience on an impressive journey from entire cells to single molecule shapes. In a BIOXHIT-sponsored session, some of the most challenging projects for future synchrotron and free electron lasers were presented. While Jochen Schneider outlined DESY's plan for a European Free Electron Laser in Hamburg, Janos Hadju from Uppsala shared his thoughts on the first life science experiments that could be conducted on a future Free Electron Laser. In a session sponsored by SPINE, current affairs in structural proteomics were presented by leading speakers from across the world. EMBL alumni Andrea Musacchio (Milano) and Patrick Cramer (Munich) gave impressive accounts of their ongoing research projects.

After the talks, the 30th anniversary celebration moved into the foyer of the VUV-FEL facility of DESY. Afterwards there followed a four-team soccer tournament (the professionals from the Boxberg Outstation won, congratulations!). The anniversary then concluded with a party which lasted until the first rain drops arrived in the early morning, following one of warmest late summer nights in Hamburg.

– Matthias Wilmanns and Silke Schumacher

Former EMBL PhD Student awarded Society in Science – Branco Weiss Fellowship

Giovanni Frazzetto, former EMBL PhD student, is one of three recipients of the 2004 "Society in Science – Branco Weiss Fellowship." Founded in 2002, this fellowship program is funded by Swiss entrepreneur Branco Weiss and coordinated by the ETH Zurich, under the direction of Helga Nowotny.

"Society in Science" is a unique experiment in research and learning devoted to exploring new avenues at the interface between science and society. It is aimed primarily at young scientists at the post-doctoral level who, as part of their scientific research, want to transcend disciplinary boundaries and extend their scientific and personal perspectives by incorporating novel social and cultural aspects into their work.

"'Society in Science' is a very important and exciting initiative for today's science and I am very happy to be able to take part in it," says Giovanni. "The programme institutionalizes transdisciplinarity; it makes the social and cultural dimension an integral part of research, and invites us to explore methodologies and concepts which link the life sciences and the social sciences. This is something that I have always wished to do. I have found my dimension."

Giovanni was a student in the Developmental Biology Programme in the group of Steve Cohen. When he joined EMBL in 1998, he soon became a member of the Science and Society Committee, chaired by Halldór Stefánsson. "The spirit of the EMBL Science and Society Committee and the activities it organized were of paramount importance in shaping my interests in science and society issues," adds Giovanni. "It was a very stimulating experience and I am very grateful."

Giovanni is about to start a transdisciplinary project focusing on how behavioural genetics and neuroscience research are reframing the notion of the "self", and how they may change our concept of individual identity and the meaning of being human. The strictly scientific part of the project will be initially conducted at Cornelius Gross's laboratory at EMBL-Monterotondo. Giovanni will also spend some of his time at the BIOS Centre of the London School of Economics and at the School of Visual Arts in New York, where he is going to cover the sociologic, anthropologic and cultural aspects of the project. While at Monterotondo, Giovanni will collaborate with Halldór and the rest of the committee to promote Science and Society activities there.

Giovanni is the second EMBL PhD student to receive the Branco Weiss award. Last year the fellowship was awarded to Giuseppe Testa, also a former member of the EMBL Science and Society Committee, who is examining the wider impact in society of stem cell and genome engineering technologies.

We wish Giovanni the best of luck for his future!

For more on the Branco Weiss Society in Science fellowship, see www.society-in-science.ethz.ch/

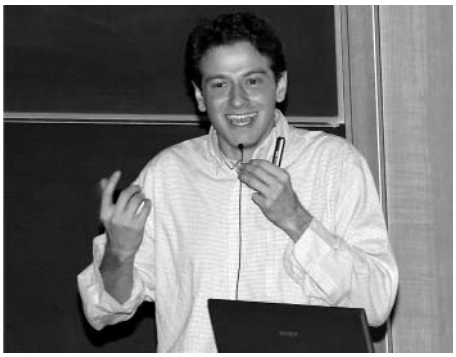

Photo by Christine Panagiotidis

Former EMBL predoc Giovanni Frazzetto will split his time between EMBL-Monterotondo and the London School of Economics as he begins his Branco Weiss Society in Science Fellowship.

Aligning our beams: Hamburg and Grenoble Outstations hold bilateral meeting

The use of synchrotron radiation for structural biology research is a common theme at EMBL's Outstations in Grenoble and Hamburg. While both are unique in their research profile, accumulated expertise and environment, there is plenty of common interest with respect to beamline instrumentation for automated high throughput experiments. In order to bring together complementary developments and build up on them, to strengthen existing and to establish new collaborations, Grenoble scientists and technical staff embarked on a journey to Hamburg for a bilateral "meeting of the minds" on August 12-13. The meeting was organized by Jochen Müller-Dieckmann and Andrea Schmidt (Hamburg), as well as Raimond Ravelli and José Marquez (Grenoble) and brought together 18 representatives from both the Outstations.

The meeting's main focus was on technology development for automating steps in the long process of obtaining a macromolecular structure from a crystal. Topics included high-throughput crystallisation, beamline automation, establishment of databases, information management and software development.

A lot of ideas and experience were exchanged in lively discussions. "This was a very productive meeting that helped to increase the ties and map out new collaborations between the two Outstations," says Victor Lamzin, one of the meeting participants and deputy head of the Hamburg Outstation.

The response of all participants was very positive and enthusiastic and the meeting was considered highly useful for both sides. We now plan to continue these meetings on an annual basis: the next meeting is scheduled for June 2005 at the Outstation in Grenoble.

– Andrea Schmidt and Manfred Weiss

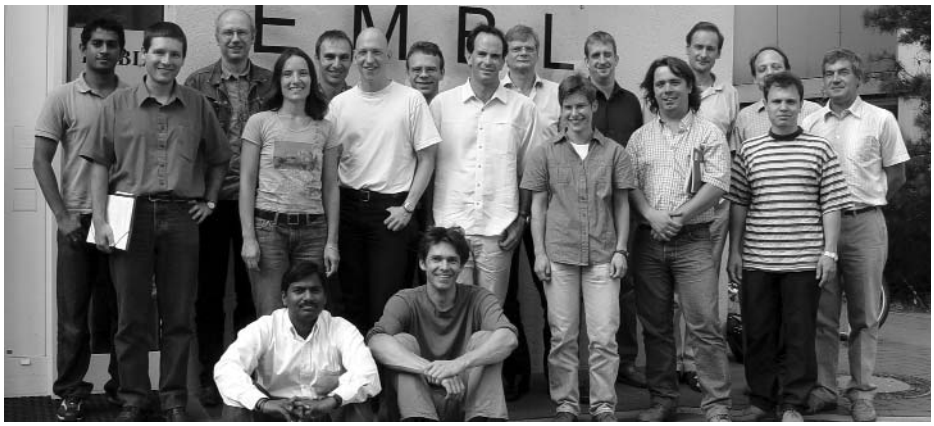

Photo provided by EMBL-Hamburg

Scientists and technical staff from EMBL-Hamburg and EMBL-Grenoble met in Hamburg in August.

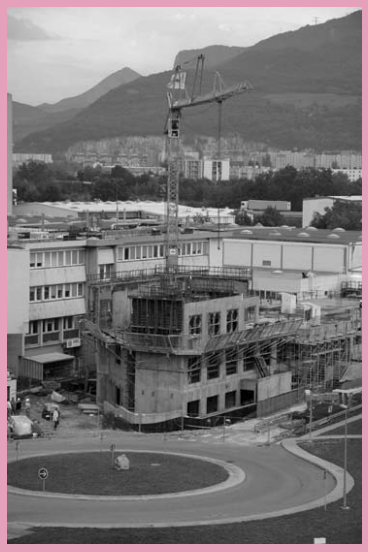

Photo by ESRF, Communication Unit

PSB building takes shape

Since groundbreaking ceremonies in June, construction of the new PSB building next to EMBL-Grenoble has advanced to the second floor. While construction is going on outside, technical platforms that will be housed in the new building are being developed in the partner institutes EMBL, ESRF, ILL and IBS. These include a protein expression, crystallization and quality control platform, electron microscopy, isotope labelling, a neutron crystallography instrument, and the ID23 beamline at the ESRF.

New protein crystallogenesis service at EMBL-Heidelberg

Obtaining diffraction quality crystals is a common bottleneck in macromolecular crystallography. With the number of projects increasing exponentially, searching for the right crystallization conditions is a time-consuming effort. The Structural and Computational Biology Programme has now set up a medium-throughput crystallogenesis platform at the main laboratory in Heidelberg with the goal of centralizing resources, cutting costs, and providing efficient and rapid service to EMBL research groups that use X-rays.

Thanks to the initiative of Jerôme Basquin and the support of Programme Coordinators Luis Serrano and Peer Bork as well as EMBL group leaders, the technology was set up quickly and easily. The platform is based on use of a nanoliter dispensing robot, standardized crystallization screens with a total of 1800 different conditions, and a database linked to an imaging system for data archiving. EMBL's expert mechanical and electronics workshop pitched in and built several devices to support and accelerate the setup of the platform.

Photo by Jerôme Basquin

Technician Angelika Scholz and Jerôme Basquin provide a new medium-throughput crystallogenesis service at EMBL-Heidelberg.

The service has multiple advantages. It significantly reduces crystallization setup costs by using fewer crystallization solutions and fewer samples. It also saves valuable time.

Limited financial investment was needed to get the service up and running. It has been functioning since the beginning of July and has already exceeded the expectations of the crystallography community at EMBL-Heidelberg, and has attracted several external users. What started as a medium throughput crystallization platform has rapidly grown and 100,000 crystallization drops have already been set up.

The service has drawn very good feedback from users both in Heidelberg and beyond, and has helped Jerôme and his colleagues to do some fine tuning to the platform. They are now able to expand and process more projects coming from groups who don't usually use crystallography and wish to do so.

For more information visit
http://crystallization-platform.embl.de
or email Jerôme at basquin@embl.de

Keeping in touch as we grow: EBI Services Day

The EBI has grown so rapidly over the past few years that from time to time we need to get together simply to explain to each other what we all do. EBI Services Day on 3 September was an opportunity to focus on how we serve our users.

A shared sense of purpose pervaded the auditorium and the poster sessions as we learned how Integr8 (www.ebi.ac.uk/integr8) and BioMart (www.ebi.ac.uk/biomart/) are helping users to make sense of information from numerous databases, without having to search them individually. Crosslinking is now an integral part of designing a new database. For example, the Reactome pathways knowledgebase (www.reactome.org) uses UniProt identifiers to represent the proteins in its pathways, Gene Ontology identifiers to describe their functional attributes, and is working with the IntAct team (www.ebi.ac.uk/intact) to ensure that pathway "events" in Reactome are crosslinked with protein–protein interactions in IntAct. Our External Services team works across the entire institute to ensure that our resources have a consistent look and feel. Staff from the research groups collaborate with the services teams to develop and implement new tools: for example, Whatizit, (www.ebi.ac.uk/Rebholz-srv/whatizit/form.jsp), a text-mining tool developed by Dietrich Rebholz-Schuhmann's research group, is used by curation teams who, in turn, provide feedback that improves Whatizit's functionality.

This air of cooperation extends well beyond the walls of the EBI: many of the service teams belong to international consortia that collaborate to collect and distribute data, as well as developing standards to facilitate data sharing and lobbying publishers to make data deposition an integral part of publishing a paper.

The day ended with beer for everyone and an excellent barbecue – as usual Graham had arranged the weather perfectly! The next pan-EBI event will be a Research Day in May 2005.

– Cath Brooksbank

Photo provided by EBI

EuroScience Open Forum glitters in Stockholm

What better way to bring science to the public than with one huge meeting pulling together researchers, journalists, and everybody else who wants to know where science and technology are taking us in the 21st century? That's how the annual AAAS event works in the United States; this highly-successful meeting draws in thousands of participants from all walks of science and society. Now the same thing has been attempted on a big scale in Europe. The first EuroScience Open Forum (ESOF), held in Stockholm from Aug. 25-28, attracted over 1,800 participants, including about 350 journalists.

The event was organized by EuroScience, a grassroots initiative that held its founding meeting and announced itself to the world at EMBL in 1997. Its aims are to promote science and dialogue between the worlds of research and the public at a European level.

The ESOF programme included talks by scientists, European policy-makers and many others; exhibits; debates and programmes for students, and end-of-the-day cocktails where themes from the day could be digested in a more informal setting. A number of satellite events brought science to the city in the form of films, exhibits, and presentations by scientists. François Nédélec from Heidelberg gave a talk, and we were also represented at a common EIROforum exhibition. Richard West from one of our partners, the European Southern Observatories, organized video broadcasts enabling high school students to interview scientists at the EIROforum facilities. Ewan Birney was supposed to be one of them, but at the last minute a moose (or something) chewed through the cable on the Swedish end. Sorry, Ewan.

Can the AAAS format work in Europe? At EMBL and within the EIROforum we're used to working on a European scale, but that's not the situation for the vast majority of scientists. Projects supported by the European Commission (also a sponsor of ESOF) aim to pull the research community together, encouraging scientists and others to confront serious issues facing European research in a united way. ESOF could certainly become a forum in which that happens, particularly if it succeeds in attracting more scientists as active participants.

The Stockholm meeting was obviously only a first step. It's hard to measure the success of these types of things, because of the loftiness of the goal. But if the community is to make big inroads in developing an identity for European science, and getting the public involved, it will have to be through mechanisms such as this one. And if there were only one measurement of success, it would be this: the clear enthusiasm of participants, sponsors, and funding bodies for the next ESOF, to be held in Munich in July 2006. Registration hasn't opened yet, but be sure to mark it with a post-it on your calendar. The event will certainly be worth attending.

Russ Hodge and Walter Staveloz (ECSITE) talk to journalists at ESOF 2004 in Stockholm.

Photo provided by EFDA

Time to put down the bagpipes: ISMB/ECCB 2004

It took two years to plan, amalgamated three conferences and involved four hosts: the organizers of ISMB/ECCB 2004, the largest ever international bioinformatics conference, knew from the start that this was going to be a complex conference to organize. If only we'd known then what we know now!

From the opening reception in Glasgow's Science Centre to the closing ceremony, ISMB/ECCB 2004 was a massive celebration of bioinformatics. The Programme Committee had selected 67 papers from 492 submissions, there were over 900 posters and we had 2190 delegates from 55 countries on six continents. The software demos proved so popular that we had to provide overspill rooms.

European bioinformaticians were especially well represented and the EBI was involved in almost every aspect of the conference. We ran 13 software demos, presented 32 posters and a paper, and formed a significant part of the volunteers' team. As Programme Chair, Janet Thornton presided over a programme that spanned the full spectrum of bioinformatics, from traditional favourites such as sequence analysis through to systems modelling. Innovations introduced by Janet included overviews at the beginning of each session and keynote speakers whose talks were themed with the sessions.

Can't wait till the next one? Next year you'll be spoilt for choice: ECCB 2005 will be held in Madrid (www.inab.org/eccb05) and ISMB will be in Detroit (www.iscb.org/ismb2005/); the next joint effort will await ISMB's return to Europe in 2007. If you see a few especially relaxed delegates at next year's conferences, check out their badges: chances are they'll be from Hinxton or Glasgow and they'll be delighted to be letting someone else take the strain.

– Cath Brooksbank

EMBL and University of Helsinki sign partnership agreement

Finland has been a member state of EMBL since 1984, and in August 2004 it became the 15th university to have a joint PhD degree agreement with EMBL.

Research and development have been recognized by a number of successive governments of Finland to be the cornerstone of a knowledge-based society. In 2003 we invested 3.5% of the GDP in R&D, which was second best in the world, and the investment is increasing. In this context, the training of PhD students has high priority. The Ministry of Education launched a nationwide graduate school program ten years ago, which today supports 114 schools operating in every university and covering all major disciplines. The schools have 4-year salaries with full social security for the best PhD students, and organize and finance high quality courses in substance domains and transferable skills.

One of our priorities today is to internationalize PhD training. We welcome foreign PhD students to Finland and want to encourage interested students to go abroad for training in the best institutions. Herein lies the motivation behind the agreement between EMBL and the University of Helsinki.

The University of Helsinki, established in 1640, has 11 faculties and 10 independent research organizations. With 38,000 Master's students, 5,800 PhD students, almost 8,000 staff and 60,000 open university students it is the third largest working community in Finland. The strategic priority of our university is basic research and research-based education. We belong to the League of European Research Universities, the 12 best out of the 4000 European universities, according to the quality of research in science, medicine and social sciences.

I wish to thank Anne Ephrussi and Milanka Stojkovic from EMBL and Markus Laitinen from our university for an excellent collaboration. The preparation of the Agreement involved incorporation into the text of the Finnish specifications of procedures and criteria, as defined by the university and the ministry, as well as two consultation rounds with our five relevant faculties. The details of the Agreement are of crucial importance, because this is the first international joint PhD degree Agreement of our university, and will thus serve as an example for others.

Finally, I have to note that Finland is currently underusing EMBL – we have only one PhD student in the programme, and another joining soon. I hope that the Agreement will catalyze our students to apply to the EMBL PhD Programme, and that joint supervision of the students will enhance collaboration between EMBL group leaders and ours. We also should explore ways of collaboration between the EMBL PhD Programme and our graduate schools.

– Marja Makarow
(EMBL alumna, Member of the Finnish Delegation to the EMBL Council and President of EMBC, and Vice-Rector for research and researcher training, University of Helsinki)

A roadtrip through Finland: Building interactions and networks

Photo by Marie Johansson

Organizers of the 2003 EMBL Predoc Symposium visit Finland for the first Finnish Predoc Symposium. Left to right: (top) Marlene Rau, Andrés Gaytán de Ayala Alonso, Thomas Sandmann, Christiane Jost, Martin Jinek; (bottom) Mikko Taipale, Stephan Meister and Felipe Mora-Bermúdez.

As soon as we saw Mikko and his 70's VW van waiting for us outside the airport, we knew it would be a trip of adventure; we were in Finland.

In November last year, a group of friendly Finnish predocs attended the 4th EMBL Predoc Symposium and, motivated by what they saw, decided to come up with an event of their own. To our surprise, they invited us to the first ever *Finnish Predoc Symposium: "Interactions and Networks in Biology."* None of us protested against the opportunity to visit Finland and attend what turned out to be a very well organized and fun event.

With support from our PhD programme, we also saw it as a good opportunity to help nostalgic Mikko end his lonesome journey among the predocs; it was time to convince more Finns to have a go at EMBL.

Our trip was a success, we made good friends, discussed good science, the van worked (most of the time), and Mikko delivered an inspired talk to his countrymen; we hope to see the results in the attendance of future symposia and when the next wave of PhD applications comes. Andrés though, remarked in his usual elegant style: "Finland can be a hazardous place, especially the saunas…". Each of us certainly returned with our own special memories.

– Felipe Mora-Bermúdez
Organizing committee of the 4th EMBL PhD Student Symposium

Who's who in the DG's Office?

Keeping the wheels of molecular biology (and the DG's office) running smoothly requires a multilingual, multitalented and multitasking crew. Match the people to their background.

Mehrnoosh Rayner

Olivera Mandic

Michael Thompson

Nathalie Leclercq

1. an ex-naval officer from Australia
2. an Iranian-born Brit with a PhD in New German Cinema
3. a French national with a master's degree in information science and Slavic philology
4. a multilingual German native of ex-Yugoslav origin who previously worked at the European Parliament.

The staff of the DG's office has a diverse background. That's good because they do diverse things: from making sure Fotis arrives safely for that meeting in Copenhagen (via Brussels, Athens, Boston, Dublin and London), to preparing documents and organizing the scientific reviews of the Lab's research programmes.

Though between them they serve as the collective interface between the Director General, members of the Laboratory, EMBL's governing Council and Scientific Advisory Committee, and the broader scientific community, they each have special areas of responsibility. Michael Thompson took over as head of the office when Manu Brunner left in August. He's the contact point for questions directed to the DG's office regarding SAC, tech transfer and personnel issues. He also takes care of the administrative side of the Kafatos lab's research. Mehrnoosh Rayner sees to partnership and endowment fund issues, and coordinates special events and projects. She also liaises with EMBL's PhD Programme and OIPA. Olivera Mandic, the most recent addition to the group, manages the DG's complex calendar, and takes care of general enquiries. Nathalie Leclercq, who works for Administrative Director Bernd-Uwe Jahn, organizes Heads of Units and Senior Scientists meetings, and faculty retreats.

More about the office staff and their activities can be found at www.embl.org/aboutus/generalinfo/leadership/index.html

Or contact them at dg-office@embl.de

(answers: a2; b4; c1; d3)

The curious mystery of the disappearing and reappearing and disappearing helix

If you have ever gone for a coffee in EMBL-Heidelberg's cafeteria you're sure to have noticed a helix sculpture rising from a black stone base in the center of the courtyard. Then again, maybe you haven't. Today, for example, all you can see is a metal pipe sticking out of the ground. It's kind of a magic trick: one month the sculpture is there; the next – *poof!* – it simply disappears.

Have you been working too hard? Do you need new glasses? Not to worry – you're probably just fine. The curious mystery of the disappearing and reappearing and disappearing helix turns out to be a well-documented phenomenon.

Etcetera reporting...

The history of the helix sculpture goes back to 1993 when then EMBL Director General, Lennart Philipson was contacted by Lasse Brander, a Swedish artist who was interested in making a sculpture for the Lab.

The original model depicts a transparent helix structure, similar to a section of round staircase made of plexiglass bricks. Brander's original idea was to build the helix around a vertical pipe that would serve as a fountain, expelling water in a spiral cascade.

EMBL Estate Manager Ernst Heinmöller was present at the time and recalls the situation with a broad smile: "Lasse came to us and said: 'OK, so I've designed it and it looks good. I don't know how to get the fountain to work – that's your job.'"

This was how the helix sculpture became the Building Maintenance team's tough nut to crack, not only during the building of the bricks and the construction of the real size structure in the Lab's mechanical workshops, but also for many years to come. According to Ernst, they are still "learning how to manage the sculpture."

For years they have tried to figure out a way for the water to come down brick by brick without splashing around the black labrador stone. It is a challenging task, especially considering the thin pipe often gets clogged with algae and other particles (least we forget Heidelberg's sub-zero temperatures in winter that quickly turn water to ice!)

The life of the helix sculpture has not been an easy one. Initial plans for the courtyard included a roof to house a winter garden, but it turned out to be to expensive to complete. Without the protective covering, air circulates freely throughout the courtyard-bringing with it a barrage of leaves, dust and insects…

Dust, algae, hard water, Heidelberg weather conditions and other non-identifiable hazards have been attacking the helix for years. And Mustafa Uyguner and EMBL's building maintenance staff have been fighting back. Their weapons? Salt, chlorine, filters, environmentally-friendly cleaning products – and a lot of elbow grease.

Each time a new problem arises, the maintenance team has to find a new solution, and the helix has to be dismantled and assembled again. Mystery solved.

Over the years some battles may have been lost, but the war is close to being won. Years of trial and error are paying off, and the team is close to perfecting their strategy. And if all else fails, they may just ask their colleagues inside the labs for some advice on how to purify DNA. Soon the helix sculpture will be assembled one more time.

– Ana Rita Moura

Photos: EMBL archive

Is the double-helix being sequenced, or is it undergoing DNA degradation?

Staff Association negotiates on several issues

Three issues stand out among the many topics that the Staff Association Heidelberg has dealt with this year, although there are of course many more.

Negotiations between the Kinderhaus Parents Panel and the Administration

Although the Staff Association committee was not invited to participate in the negotiations on measures to reduce the deficit at the Kinderhaus until a later stage, it was generally informed of the proposals by the Parents Panel, and it consequently asked the Administration for regular updates during the talks. A committee member with a child in the Kinderhaus also attended parent's meetings on a private basis and kept the committee informed. The Staff Association recognizes the need to cut costs and bring individual contributions up to a fair level, but regrets the simultaneous reduction in services, which could endanger the existence of a very important recruitment tool in attracting top young employees to Heidelberg, especially women.

Pension scheme issues

Several pension issues have also occupied our attention recently: For one there is an apparent discrepancy in the way that pensioners' HIS (health insurance scheme) contributions are calculated. Although pensions are adjusted only by the cost-of-living increase each year, HIS contributions are calculated on the basis of salary adjustments, which include not only the cost-of-living but also a standard-of-living increase. With each passing year, therefore, not only do pensions lose ground compared to salaries, but the HIS contribution represents an ever-increasing percentage of the pension. In June the Council approved the continuation of this practice with the recommendation to bring it before the working group on the Terms and Conditions of Employment. The Staff Association intends to bring this to their attention and also to recommend, for new pensions, the reinstatement of Article 12 (inward and outward transfer of pension rights), Article 36 (standard-of-living increases), and Article 42 (tax allowance) to the Pension scheme rules. Regarding Article 12, a group of German pensioners won the right to transfer earlier pension contributions from the German system into the EMBL scheme by filing an appeal with the ILO. The ball is now in the court of the German Ministry of Labor, which must approve the transfer. However, the German government does not recognize the authority of the ILO and is not keen to release any money from its dwindling pension fund, so that the procedure has been held up for several years.

Revision of Staff Association statutes

A Staff Association subcommittee has been wrestling with the huge task of revising the Staff Association statutes, which have not been updated since 1995. Many of the changes have been cosmetic, *e.g.* adding clear references to the Outstations and to duties that did not exist in 1995. One of the biggest challenges has been the adaptation of the election procedures to reflect the changes in size and make-up of the EMBL community. The revised statutes will be presented to the staff for approval in a special General Assembly, after which, according to the Rules and Regulations, they will be sent to the Director General for acceptance. Our goal is to hold the General Assembly and put the new statutes into effect before the next elections in Spring 2005.

– Ann Thüringer

the EMBO corner

6 out of 45

A national lottery's winning combination! Choosing the right career path, finding the right training and obtaining funding to support your career goals can be as difficult as hitting upon those elusive winning numbers. Add to this the complication of moving countries or continents and the search can become even more complex.

This is where the Life Sciences Mobility Portal (LSMP) comes in. Launched in January 2004 by the European Molecular Biology Organization (EMBO), the portal is designed to help life scientists worldwide find their own winning career combinations without having to buy a ticket.

The LSMP is funded by the European Commission (EC) as part of their initiative to promote researcher mobility in Europe. The more tailored EMBO portal for life scientists complements an umbrella portal from the EC aimed at researchers across all scientific disciplines.

Looking to go places?

The LSMP's integrated search engine finds the fastest route to information on international training, funding and career opportunities in the life sciences. Use individual or combination keywords to save time and pinpoint exactly what you are looking for. No more sifting through piles of often unconnected or unwanted material.

The portal also acts as a one-stop shop of other useful links for life scientists on the move – grouped by subject area to help ease your search. Users can browse links to "restart" programmes, grants databases, job sites and life scientist organisations. And the practical side of relocation is not forgotten. From within the portal, you can access handy links on national visa requirements, work permits and other specific country information.

Lonely planet?

It need not be with the portal's networking and exchange facilities. You can use the collaborative partner database to find a scientific partner match, insert your own research profile and generally get connected with the life scientist community.

Need the personal touch?

Then take advantage of the LSMP's unique personal consultancy service. Individual answers to your funding or mobility questions are only an e-mail away and all advice is offered free of charge.

Plan your next move in an informed way and make it a good one – visit the Life Sciences Mobility Portal and explore the wealth of international opportunities on offer to you.

Life Sciences Mobility Portal
http://mobility.embo.org

European Commission's pan-European Researcher's Mobility Portal:
http://europa.eu.int/eracareers

– Sabine Schneider

Life Sciences on the Côte d'Azur: ELSO 2004

The people of the Côte d'Azur must be getting used to biologists by now. For the second time, the European Life Scientist Organisation (ELSO) took over downtown Nice for their annual conference from Sept. 4-8 this year. In collaboration with the Eighth World Congress for Cell Biology, the event attracted 1,700 scientists to a programme of fascinating scientific talks, posters, round tables on science careers, awards, and exhibitions including new products from the biotech industry.

Several EMBL scientists made the trip, to give talks, receive awards, or just to bask in the sunlight... er, to bask in a wealth of new findings presented by other scientists. The roster of EMBL scientists giving talks included Carsten Schultz, Isabelle Vernos, Matthias Hentze, Kota Miura, Felipe Mora-Bermúdez, Katharina Ribbeck, Pernille Rørth, Jan Huisken, Jeremy Simpson, Francois Nédélec and Jan Ellenberg. Incidentally, Jan also received the 2004 ELSO Early Career award. Other prize winners included Julien Colombelli and colleagues, who received second prize in the Cinema of the Cell competition for their bioclip, "Laser cytoplasmatic nanosurgery: dissecting the cytoskeleton." You can watch the clip at www.bioclips.com. Make sure you also check out the entertaining educational clip "Marius explores the cell."

Launched in 1999, ELSO promotes the molecular life sciences and the public understanding of science. Increasingly, the organization is stepping forward to help shape European research policies. As plans to create a European Research Council move forward, ELSO wants to ensure that researchers are heard and their needs are carefully considered.

A recent "Petition for a new and ambitious European science policy" put forward by ELSO has been signed by 5,000 scientists and has opened the door to fruitful discussions with policy-makers at the EC.

"In looking at how this is developing," says ELSO President Kai Simons, "we feel that more attention must be given to basic, long-term research, to young scientists, to small networks and individual grants, to innovation and creativity. The application procedure needs to be simplified and the administrative burden on those who apply should be reduced."

– Russ Hodge

Photo by Kota Miura

Julien Colombelli (right) accepts his award at the Cinema of the Cell competition at ELSO 2004.

A special day at EMBL

September 2 was a very special day at EMBL-Heidelberg. It was the day that the kids from the Waldpiraten camp paid a visit. The kids – 30 of them – were taking part in a week-long stay at the Waldpiraten camp for kids with and recovering from cancer, located across the street from the Lab. This year's list of activities included a trip to the Lab.

After a short introduction to the molecular biology, the kids put on EMBL caps and had a go at being researchers for a day.

With the help of Christiane Jost and Daniel Forler, they extracted DNA from mushed up bananas; after that they sorted *Drosophila* under the microscope in the fly room with Thomas Sandmann.

When all was said and done (and it was time for lunch back at the camp), the kids collected their tubes filled with mushed up banana DNA to take home to show mum and dad.

Photo by Maj Britt Hansen

alumni profile

A road less travelled: EMBL alumnus Colin Dingwall's journey to EMBL and beyond

Colin Dingwall was a visiting scientist in Iain Mattaj's group in EMBL's Gene Expression Programme from 1993-1995. He is currently an Assistant Director of Research at GlaxoSmith-Kline in Harlow, UK. Here is his story...

Pre-EMBL preamble: the road less travelled

Because of a misspent youth I did not turn to science until late, starting my undergraduate studies in biochemistry when I was 25. While the next step after graduating would have been to a PhD, I had a family to support, so I had to get back to work as soon as possible. On the Monday after the graduation ceremony I was back on the factory floor.

I had almost given up the idea of doing science when Alan Fersht (MRC Cambridge) advertised for a technician. I was invited for interview and was happy just to walk down the hallowed corridors of the LMB. Getting the job was a bonus. Alan was writing the first edition of his book and studying editing mechanisms in the amino-acyl tRNA synthetases using rapid reaction machines built in the LMB workshop: engineering works of art. Towards the end of each day of experiments Alan and I would stand by the scintillation counter plotting the graphs as the numbers came up on the display. A fantastically exciting time. We got three back-to-back papers in *Biochemistry* from that work.

Alan then accepted a professorship in London but I did not want to leave Cambridge, and transferred to Aaron Klug's group. I really wanted to work in cell biology so when Ron Laskey had a vacancy I moved again. Ron was working on a nucleosome assembly factor, nucleoplasmin, and noted that when partially degraded it no longer re-entered the nucleus when injected into the *Xenopus* oocyte. I used a range of proteases to clip the protein at defined points with the result that we identified the polypeptide domain directing the protein to the nucleus. This got us a *Cell* paper and Ron suggested I register for a PhD; he would arrange for me to receive a salary. For this I will be eternally grateful. So 10 years after my undergraduate degree I got my PhD.

I continued to be fascinated by nuclear trafficking and identified the two steps in nuclear protein import. I then decided to try a change and did a postdoc looking at gene regulation in HIV. This led to the demonstration that HIV tat binds TAR RNA and that HIV rev binds RRE. I continued to work on nucleoplasmin in my spare time and in collaboration with Ron, who with John Gurdon was setting up the Wellcome CRC Institute, identified the bipartite NLS.

EMBL Interlude and a shock to the system

Rumours that the MRC was to shut down its HIV work made me think of getting back into nuclear protein transport. However, by then many top rank labs and some exceptional people were in the field and quickly I became "scientific road-kill."

I had met Iain (Mattaj) and discussed with him the possibility of using permeabilised nuclei which Ron was using in his DNA replication experiments to look at nuclear export *in vitro*. I came to Iain's lab and helped set up the system and in the end stayed for two years. This was a very exciting period in nuclear trafficking; in Iain's group there was great work on RNA transport going on and Karsten Weis in Angus Lamond's group had identified one of the importin alpha NLS receptors. With Bertrand Séraphin and Steffi Lewis we found that one of the yeast nucleoporins had a Ran binding domain. So with this chance to learn from some remarkably talented people I was feeling a little less like road kill and took up a position in the USA and began, finally, to set up my own lab.

USA: you must learn to say no

Teaching anaesthetics to medical students was not the direction I really imagined my career would take; but it did. Finding it hard to resist the blandishments of my departmental head, my burden of similar "development opportunities" increased. I realised that this correlated with a decreased likelihood of getting significant funding in an ever more competitive field. I decided to jump ship before I sank. Luckily an approach came from SmithKlineBeecham who had just recruited some excellent scientists; Peter Goodfellow who was Professor of Genetics at Cambridge was heading the R&D division at the time. They needed cell biological expertise in the neuroscience division. It would mean learning some neuroscience and getting to grips with Alzheimer's Disease and other neurodegenerative diseases. I figured if I could learn to teach anaesthetics, I could cope with this.

Big Pharma: one experiment, 50 meetings

Industry has been a great experience and has given me the opportunity to establish scientific credibility in a new field (Alzheimer's Disease) while learning to manage large, high-risk, drug discovery programmes across an international organisation. The organisation's size makes it possible to bring huge resources to bear on a problem, but there are negative consequences. These are mostly due to the many levels of approval required to run a research programme. I have given the same presentation to the same people several times; only the name of the committee and the room change.

We are fond of slogans; "Never forget it is all about people," or "You manage projects but you lead people." Nonetheless, they capture the emphasis placed on leadership and management.

One colleague who had been in the industry for many years gave me this advice:

- Look after your colleagues as they are your most important resource
- Be accessible, interactive, energetic and decisive
- Publish, publish, publish, because at the end of a scientific career that is the tangible output (unless you are lucky enough to discover a drug).

– Colin Dingwall

Check out stories from other EMBL alumni at www.embl.org/aboutus/alumni/stories.html or submit your own to alumni@embl.de

science for teachers

In October, the European Learning Laboratory for the Life Sciences (ELLS) did something that will soon have a direct impact on EMBL's kids. 30 teachers from the European Schools, which some of our children attend, came for a hands-on introduction to the fast-changing world of biology. The teachers left with lots of new ideas, activities to do in class, and a good idea of where to come when they need help.

Probably more than anyone, EMBL parents see the wide gap between what's going on in science and schools. The ELLS builds a bridge between these worlds, giving teachers a chance to do science, and researchers an opportunity to teach.

Over a dozen EMBL staff helped out in the three-day course, exploring themes from the genes that guide eye development in fish to bioinformatics, to microarrays. Iain Mattaj dropped by to give a general introduction to the Lab, and the wide range of themes covered by EMBL science. Other units of the course were conducted by Tetyana Klymenko, Francesca Diella, Sophie Chabanis-Davidson and Sabine Schmidt, with help from others. Sabine Hentze and Halldór Stefánsson joined the fray to do a Science and Society project on Genetic Screening, developed by Giovanni Frazzetto. A hit was, as always, Anastasios Koutsos' Virtual Microarray, using green and red flashlights and velcro and the world's largest microarray (that should probably be macroarray), 3.8 m x 1.3 m – 50 times larger than the actual slide.

EMBL's big fat Greek party

With a victory in the European Football championship and successful hosting of the Olympic Games 2004, this has definitely been a good year for the Greeks. And what better reason to celebrate! On September 11, the resident Greeks and Greek Cypriots at EMBL-Heidelberg polished their cooking and dancing skills and presented an authentic Greek and Cypriot night.

Party-goers whetted their appetites on Kalamata olives and cheese and tasted a selection of premium Greek wines (learning that there is much more to Greek wine than retsina!). They then filled their bellies with tzatziki, salads, lamb and shrimps with cheese – all prepared by their Greek colleagues. And so typical of Greek parties, there was so much food that everyone had to take home leftovers.

Once the plates had been cleared away, it was time for dancing. A live band played popular Greek songs while Melpi Platani, Margy Koffa and others demonstrated traditional folk dances from different regions of Greece. They twirled and clapped to the "kalamatiano", "hasapiko", "zeimbekiko" and "syrtaki". Director-General Fotis Kafatos led the group in a special rendition of the "chaniotiko", a traditional dance from the island of Crete. Demonstrations completed, guests took to their feet and gave it a go. The dance floor took a battering as people stomped, clapped, twirled until the wee hours.

The final assessment? 170 people made their way through 120 liters of wine, 30 liters of ouzo, 40 kilos of lamb, 10 kilos of shrimps, 15 kilos of feta cheese, 10 kilos of tzaziki and 10 kilos of yoghurt – and 4 hours of crazy dancing. As always, special thanks go to the EMBL Staff Association for sponsoring the party and to the canteen staff for their help with the food preparation.

"EMBL has a long tradition of volunteer-organized national parties," says Doros Panayi, co-organizer of the event. "It's a nice way for staff to get together informally with their colleagues and celebrate their cultures. Glimpses into aspects of cuisine, poetry, music and traditional dance always end with a demonstration of party stamina!"

Next up is a Scottish *ceilidh* to take place during the upcoming Alumni Reunion in November, and the Santa Maria night organized by the Scandinavians in December.

– Anastasios Koutsos

Photo by Maj Britt Hansen

Melpi, Fotis and Margy lead party goers through the intricate steps of the "kalamatiano" at the Greek-Cypriot party on September 11.

EMBL technician Heike Brand takes time off to help street kids in Brazil

In January of 2005, Heike Brand, a technician in Frank Gannon's Group, will begin an unpaid 6-month leave of absence to do voluntary work in Brazil with the non-governmental organization *Grupo Rua e Praças* (www.rua-ev.de). The organization, founded in 1987 by Brazilian citizens, provides care for street children in the city of Recife. Located in Northeast Brazil, Recife has a population of 2.6 million, of whom 2,000 to 10,000 are considered "street kids."

The United Nations has estimated the population of street children worldwide to be 150 million, with the number rising daily. Ranging from ages 3 to 18, 40% of these children are believed to be homeless, while the remaining 60% work on the street to support their families. Often street children are the defenceless victims of brutal violence, sexual exploitation, neglect, chemical addiction and human rights violations.

Heike will join other volunteers, many of whom are educators, in projects that include working on the street, providing assistance to families, and running a camp outside of the city to give children an opportunity to "be children." Heike is looking forward to offering her assistance wherever needed. "I am not an educator, I am a technician, but I want to help the children, and to let them know that there are people all over the world who care about them." She also believes that working directly with the children, and seeing first-hand the help they require will make her better able to serve the organization when she returns to Germany.

Heike will arrive in Brazil armed not only with good will, but also with more than 900 Euros worth of donations that she raised from EMBL staff in early October by selling handicrafts made by the children in Brazil. The money will go directly to the organization to help buy food and supplies for the kids.

If you would like to help Heike by making a donation, contact her at brand@embl.de.

– Carla Sciarretta

Reaching new heights: EMBL at the pinnacle of Germany

Photo by Rainer's wife, Karin.

One day over coffee, Rainer Menzel and his colleagues from EMBL-Heidelberg's Building Maintenance team discussed Rainer's upcoming holiday in the Alps.

"Rainer," they said, "why don't you climb to the top of the highest mountain in Germany and fly the EMBL flag."

"You provide the flag, and I'll let it fly," he replied.

And that's just what they did. Here are Rainer (left) and his sons Patrick and Marc atop the Zugspitze (2964m).

news & events

September 10 marked the first meeting of the "Rome Muscle Club." The initiative, spearheaded by Nadia Rosenthal of EMBL-Monterotondo and Stefano Alema of the Italian Institute IBC/CNR, is aimed at providing a forum for researchers in the fields of myogenesis and cardiogenesis to discuss their findings and exchange ideas. Rosenthal and Alema believe that such a club will facilitate discoveries and collaborative initiatives among the 20 groups in the Rome area that share this research focus. *– CS*

people @ EMBL

Wolfgang Huber is a new interdisciplinary Group Leader at the EBI with a joint appointment to the Gene Expression Programme. He did his postdoctoral work at the German Cancer Research Center in Heidelberg and at IBM in San Jose, CA, USA. He obtained his PhD in 1998 from the University of Freiburg. At the EBI, the research of Wolfgang and his group will focus on statistical methods for the design and analysis of large-scale functional genomics experiments and modeling of genetic networks.

Nicole Norris and Louise Coulter, two very familiar faces in the personnel section, will be leaving EMBL this autumn. We would like to thank them for their friendly and helpful support over the years and wish both of them all the best for the future! At the same time, we are pleased to welcome **Silvia Galbusera** who joined the recruitment team in September. We are sure that you will give her all assistance to settle in and enjoy the experience of working at EMBL.

– the Personnel Section

faculty appointments

David Flot has been appointed a staff scientist at EMBL-Grenoble. **Klaus Scheffzek**, Team Leader in the Structural and Computational Bioloigy Programme has received a joint appointment with the Developmental Biology Programme.

awards, honours & cetera

Group Leader **Jan Ellenberg** has been awarded the 2004 ELSO Early Career Award. The prize was given in recognition of Jan and his group's studies of the breakdown and reformation of the nucleus as living cells divide, using state-of-the-art microscopy. The 1,000-Euro-and-a-pair-of-binoculars award was presented to Jan at the ELSO 2004 meeting in Nice on September 7 (see page 7 for more). Past winners include EMBL Group Leader Elisa Izaurralde (in 2000).

Team Leader **Reinhard Schneider** has been elected to the Board of Directors of the ISCB (International Society for Computational Biology). He will serve in the Governance and Finance Committee for a 3-year term, beginning in January 2005.

from the kinderhaus

Photo by Marietta Schupp

Last December the Kinderhaus children, parents and teachers organized a Christmas Bazaar. They made gifts, cakes and other handicrafts, and sold them, raising 700 Euros.

The goal was to raise money for needy families and kids, as well as to invest in some much-needed gymnastics equipment for the Kinderhaus.

Proceeds were used to make a donation to World Vision, an organization which aims to fight hunger in developing countries. The money they raised will buy goats, chickens, a rooster and fruit trees for families in Africa and South America.

Who's new?

Mumna Al Banchaabouchi (Rosenthal), Joachim Berger (Cohen), Silvia Bertini (Hamburg Administration), Pascale Beudin (Grenoble/Monterotondo Administration), Peter Bieling (Surrey), Klaus Brunner (Finance), Staale Ellingsen (Wittbrodt), Silvia Galbusera (Personnel), Isabel Garcia Saez (Cusack), Xandra Kreplin (Müller-Dieckmann), Nadia Mercader (Neumann), Jennifer Raabe (BioMalPar), Karine Robbe (Sequence Database Team), Nicolas Rodriguez (EBI), Florian Sebrich (Hermes), Peter Sehr (Chemical Genomics Core Facility), Jakob Wilhelmus (Canteen and Cafeteria)

events @ EMBL

5-6 November, 2004
EMBL-Heidelberg
EMBL-EMBO Science & Society Conference: Time and Aging: Mechanisms and Meanings

10 November, 2004
EMBL-Heidelberg
EMBO Conference on Structures in Biology

15-18 November, 2004
EMBL-Heidelberg
Council meeting

15 November, 2004
EMBL-Heidelberg
Anniversary celebrations at the Rosengarten in Mannheim

26-28 November, 2004
EMBL-Heidelberg
1st EMBL Alumni Association Reunion: EMBL Yesterday, Today and Tomorrow

2 December, 2004
EMBL-Heidelberg
5th International EMBL PhD Students' Symposium
Design of Life: Learning from Nature

For more events, see www-db.embl.de/jss/EmblGroupsOrg/t_1

Hey EMBL staff!

Join in on the Alumni Reunion fun! Inhouse registration is now open. Follow the "Reunion 2004" link on the Alumni Association homepage:

www.embl.org/aboutus/alumni

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