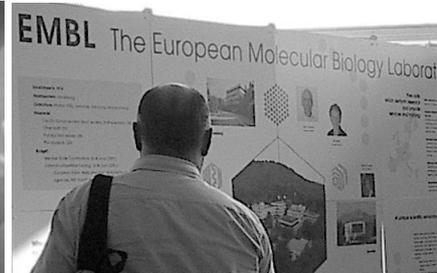




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EM core facility opens at EMBL Heidelberg

Research groups in EMBL's Cell Biology and Biophysics Programme are moving over to make space for new neighbours: the electron microscopy group. Led by Claude Antony, the group will function as a service while carrying out research. The group is based on the successful model of the Advanced Light Microscopy Facility, which serves as a training center for visitors from across the member states, while at the same time performing cutting-edge research. [on page 2](#)

HD Forum draws welcome support

The Heidelberg Forum on the Biosciences and Society, a collaboration between EMBL, the German Cancer Research Centre, and the University of Heidelberg, has given a welcome boost as MLP founder Manfred Lautenschläger announced he will sponsor the initiative's series of talks on science and society. [on page 4](#)

ALMF celebrates five years of looking at really, really, really, really, really small things

The Advanced Light Microscopy Facility goes into its sixth year with an influx of new equipment from the world's foremost microscope manufacturers. Totalling more than 1 million Euros, the machines will light up the microscopic world in a much wider spectrum of color for EMBL scientists and visitors. [on page 2](#)

4 years old and already a classic: the EMBO/EMBL joint conference on Science & Society

The structure of DNA was solved, and as if the ultimate determinant of the course of all life on the planet had been revealed, Jim Watson famously proclaimed, "We used to believe our destiny was in the stars; now we know it is in our genes." He was partially right, but to what extent? "Genetics, Determinism and Human Freedom" takes the EMBL/EMBO joint conference on Science & Society into its fourth year on 14-15 November. A mixture of scientists, communicators, philosophers, ethicists, legal experts, and patient and consumer representatives will present and discuss, repeating the successful recipe that annually brings over 200 participants to the EMBL Operon. In four sessions ("technological revolutions," "genes and disease," "the use and abuse of genetic information," and "fast forward into the future"), the conference will analyse the social impact of the increasing accessibility of a person's genetic information to the probing of science, medicine and the information society. For more information, see www.embo.org/projects/scisoc/scisoc2003.html

Special insert for Newcomers (and maybe some Oldcomers)

If only you had known when you first arrived at the lab...

A two-page insert in this issue gives insider tips for setting up camp at the main Laboratory, in Heidelberg, in Germany, and maybe the universe as we know it.

Predocs and other newcomers will get the low-down on who's who and what's what. For example: do I really have to respect the double yellow lines when parking my car out in the lot? Answer: YES!!!!!!

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Establishing an Electron Microscopy Core Facility at EMBL

Research groups in EMBL's Cell Biology and Biophysics Programme are moving over to make space for new neighbours: the electron microscopy group. Led by Claude Antony, the group will function as a service while carrying out research. The unit is based on the successful model of the Advanced Light Microscopy Facility, which serves as a training center for visitors from across the member states, while at the same time performing cutting-edge research.

The need for the service arose from an increasing demand by scientists for electron microscopy for cell biology. Several EMBL groups are turning to EM techniques to get a better look at cell structures and molecular complexes. The facility will help prepare samples for simple morphological analysis or immunocytochemistry to label and localize antigens (cryosections, lowicryl, etc.). An emphasis will be put on High Pressure Freezing (HPF) using a new machine dedicated to the cryofixation of samples from yeast cells to much larger objects.

"High pressure freezing gives us a very powerful and efficient way to perform cryofixation of cells," says Claude. "Whole pellets

of cells can be frozen in milliseconds. The procedure can be performed on big cells or small embryos. It can even be performed on *Drosophila* oocytes, opening this field to a level of imaging that has not been possible before."

Claude joined EMBL in June after having worked in the lab of Nobel Prize-winner Paul Nurse at Cancer Research UK in London. There he developed EM studies to analyze the precise organization of cytoplasmic microtubules of the fission yeast and obtain a 3D reconstruction of this network, which is essential in establishing and maintaining cell polarity and tip growth. At EMBL, Claude and his team plan to use EM methods to study mitosis in budding yeast and take a close look at the mitotic spindle organization in wild-type and mutant cells. They are currently looking to recruit a post-doctoral fellow to help them.

The new electron microscopy facility finds solid footing in a long history of expertise in cryofixation procedures at EMBL. Jacques Dubochet and Stephen Fuller, for example, were pioneers in these techniques. Gareth Griffiths and his group have also enriched

the EM environment for cell biology through training, courses and supporting many groups who use the techniques.

The HPF machine will increase the range of equipment devoted to the preparation of cell specimens, which includes several microtomes and cryotomes for ultrathin sections (in total 5 machines plus a freeze substitution machine). Taken together, the high-resolution EM machine, generously given to EMBL by the German Research Ministry on the occasion of the Heidelberg Laboratory's 25th anniversary, and the HPF will help make EMBL one of the strongest EM centers in Europe.

The Electron Microscopy group will also help EMBL to fulfill one of its primary missions – to provide training to visitors from member states. If demand exceeds the facility's capacity, researchers will submit project proposals that will be evaluated by a committee. Successful applicants will come for one to two weeks to use the equipment, after which they will return to their home institutions with expertise and their cryofixed samples in hand.

Advanced Light Microscopy Facility celebrates its fifth birthday

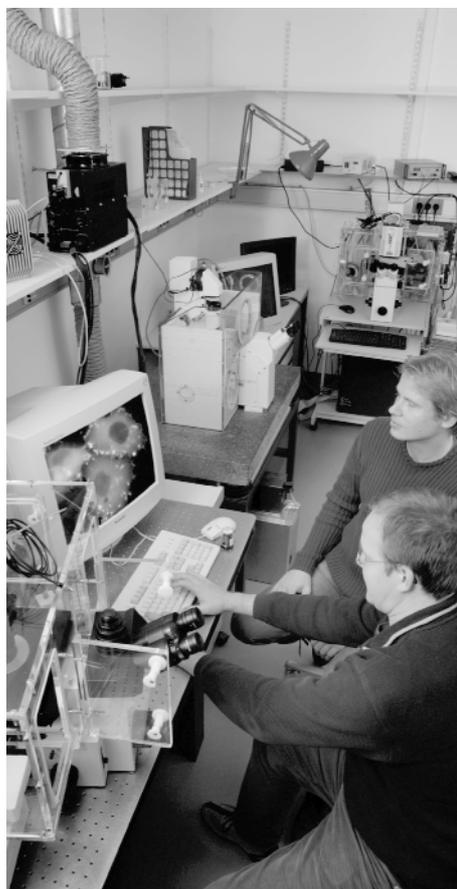


Photo by Maj Britt Hansen

Jens Rietdorf and Timo Zimmermann at work on some of the new ALMF microscopes.

In October of this year, Rainer Pepperkok and his colleagues in EMBL's Advanced Light Microscopy Facility popped the corks on the champagne to toast their fifth anniversary.

"When we started the facility, we had two microscopes, a handful of visitors, and a lot of ambition," says Rainer. "Today the ALMF has twelve microscopes and is one of the most advanced centers for microscopy in the world." The facility is a unique collaboration between research and basic industry, where commercial collaborators provide cutting edge equipment to the laboratory free of charge. Visiting and EMBL researchers work together with facility staff to perform their own experiments and try out the latest in microscopy technology.

The candles on the cake are the recent acquisition of more than one million Euros' worth of new equipment from industrial sponsors, including wide-field and confocal microscopes from Olympus, Leica and Zeiss. "The arrival of the new equipment is a tribute to the success of the ALMF over the years," says Rainer, "and also to the groups at EMBL and beyond who have trained on them."

The new microscopes allow some of the fastest and most detailed confocal imaging possible. Researchers can now track extremely complex cellular processes that

require the orchestration of several different molecules. They can monitor the dynamics of proteins, membrane-bound organelles or parasites trafficking inside cells as well as the movement of cells inside entire organisms. Biochemical reactions can also be investigated by modern light microscopy methods, such as fluorescence recovery after photobleaching (FRAP) or fluorescence resonance energy transfer (FRET). The new equipment in the facility also permits the imaging of a wider range of colours, which allows a greater number of molecules to be studied.

"Until recently we could only distinguish three to four colours," says Rainer. "With the new light sources and optics we can see a whole rainbow spectrum of colours – anything we have a reaction for. We have also developed software that helps us to interpret and dissect the complex image information we can obtain with the new systems, giving us a better understanding of the roles played by particular molecules during different cellular processes."

For more on the latest developments at the ALMF, visit www.embl.de/ExternalInfo/almf/new.html

molecular medicine

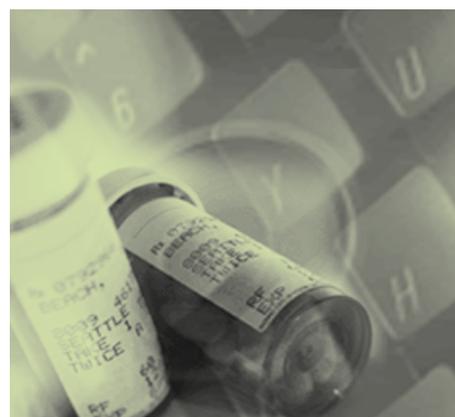
Tackling toxicity and pharmacology through bioinformatics

"If the European Union (EU) gets its way, toxicology will soon be booming in Europe," stated a recent news article (*Science* 300, 404; 2003), referring to the EU's proposal to make the European chemical industry responsible for performing toxicity tests on over 30,000 chemicals that are already on the market. When this policy is implemented, "toxicogenomics" will be invaluable to gain insight into the molecular mechanisms of toxicity, contributing to the assessments of the potential effect of substance on human health. Toxicogenomics combines the conventional tools of toxicology (such as enzyme assays, clinical chemistry, pathology and histopathology) with the new approaches of transcriptomics, proteomics, metabolomics and bioinformatics. It has the potential to reduce costs and to lower the number of animals used in toxicity testing.

In the USA and Japan, massive initiatives in this field have already been launched over the past two years, with the participation of regulatory agencies, academia, and industry. In particular, the US Food and Drug Administration Pharmacology and Toxicology Subcommittee is considering the submission of microarray-based gene expression data as part of the drug approval process.

This marriage of toxicology and genomics has created not only opportunities, but also new informatics challenges. The EBI's Microarray Informatics team is rising to the challenge: in 2002 they teamed up with the International Life Sciences Institute (ILSI) Health and Environmental Sciences Institute's (HESI) Genomics Committee to establish a database for toxicogenomic gene expression data. The ILSI-HESI Genomics Committee, which includes experts and advisors from academia and government laboratories across the globe, has designed, conducted and analyzed numerous toxicogenomics experiments to determine whether known mechanisms and pathways of toxicity can be associated with characteristic gene expression profiles. As part of this collaborative undertaking, ArrayExpress – the EBI's infrastructure for microarray gene expression information – has been extended so that it can include microarray data in conjunction with conventional toxicology (or pharmacology) endpoints such as clinical observations, histopathology evaluation and clinical pathology.

The Microarray Informatics Team is now also collaborating with the US NIH National Institute of Environmental Health Sciences National Center for Toxicogenomics



Graphic by Petra Riedinger

(NIEHS-NCT). Together they are planning to establish a common, public infrastructure for toxicogenomic data on an international scale. This will provide a repository for data publication and sharing among laboratories, and a common resource for analysis, data mining, and discussion. Ultimately, it will also serve as a reference for regulatory organizations as they evaluate toxicogenomic data submitted as part of registrations.

The Toxicogenomics Project at EBI:

<http://www.ebi.ac.uk/microarray/Projects/ilsi/>

– Susanna Assunta Sansone
and Cath Brooksbank

EMBL alumni association board lays plans for upcoming alumni events

September 17th saw the arrival of some familiar faces at the Heidelberg lab as the newly elected board members of the EMBL Alumni Association met to discuss plans for upcoming alumni events and activities. On the agenda for the meeting were fundraising activities, the establishment of local EMBL alumni chapters and plans for the next general alumni reunion, to take place in 2004.

An important theme discussed was the establishment of local EMBL alumni chapters. Many ex-EMBL researchers now work in cities or regions populated by other alumni from the lab, and this provides a perfect setting to meet up with old friends and to organize activities and networks. For exam-

ple, alumni could visit institutes of other local ex-EMBL researchers to give lectures. They could also help inform departing EMBL staff about career opportunities and issues likely to affect them when they leave the lab. They could help develop webpages for the exchange of practical information, including job offers, and tips for arriving in a new city. Local chapters can also be particularly effective in organizing fundraising initiatives. If you are interested in setting up a local chapter in your area, contact us at alumni@embl.de.

Mark your calendars now for the general alumni reunion to be held in Heidelberg on November 26-28, 2004. The theme will be

'EMBL yesterday, today and tomorrow.' This is the ideal opportunity for all EMBL alumni to catch up with old friends, to make new ones, and to meet researchers currently at the lab (the alumni of tomorrow!). The meeting will include scientific talks from past and present EMBL staff, poster sessions, practical discussions about how alumni can help each other, as well as a science and society session. As many alumni may be nostalgic for EMBL's traditional Burns' night parties, we've also planned a Scottish Ceilidh, so don't forget to pack your pipes and kilts.

Check the alumni association website regularly for updates at www.embl.de/alumni/



Photo by Marietta Schupp

The Alumni Association board: Giovanna Bergamini, Daniel Louvard, Noreen Murray, Konrad Muller, Angus Lamond, Lennart Philipson, Colin Dingwall, Albert Stegmüller, Sarah Sherwood, Sabine Hentze. Not present: Annalisa Pastore, Juan Valcárcel, Renata Stripecke, Marino Zerial

The EMBL Alumni Association e.V. announces a postdoctoral fellowship for a Swedish researcher at the EMBL.

The fellowship is funded by the Swedish Foundation for Strategic Research for an initial period of two years. Applicants must have done their PhD at a Swedish University.

Applications must be received by December 15, 2003.

For more, see www.embl.de/alumni/

education@EMBL

Physics on Stage 3

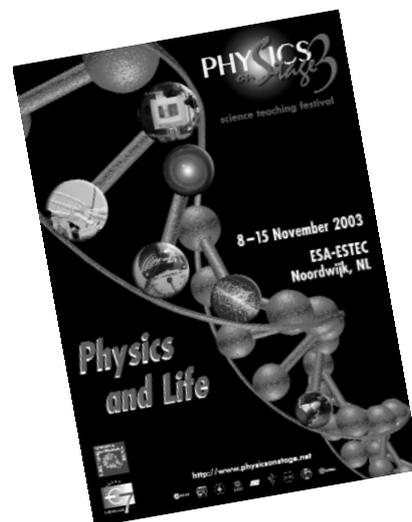
What do you get when you throw 150 of the best science teachers in Europe together for a week? One result is a truckload of great new ideas about how to bring physics, biology, and the other natural sciences into classrooms; you also get new teaching materials, hot discussions about curricula, and the chance to watch creative performances based on science. Not to mention ice cream that is made, somehow, using liquid nitrogen.

All of these things and more will happen at Physics on Stage 3, to be held from November 9 to 15 in Noordwijk, Holland. POS is an international festival organized by Europe's seven intergovernmental research organizations (the EIROforum) with support from the European Commission, under the umbrella of Science Week. This year's theme

is "Physics and Life," one step towards expanding the festival to encompass other sciences. Starting next year, the programme will be called "Science on Stage."

The festival is the result of a year's work on the part of teachers throughout Europe, who brought projects to national events; the best were selected to come to Noordwijk. Their efforts will be visible in a teaching fair that lasts the whole week.

Also on the programme are seminar/workshops conducted by scientists. EMBL's contribution will come from the staff of the European Learning Laboratory for the Life Sciences. Last but certainly not least, EMBL's Eric Karsenti, head of the Cell Biology and Biophysics Programme in Heidelberg, will be giving the keynote speech. So if you'd like to see him in a tuxedo (somebody remember



to call a tailor!), drop in at the Opening Ceremony; it's November 10 on the campus of the European Space Agency in Noordwijk.

More details are available at www.physicsonstage.net

Science & Society

Heidelberg Forum on the Biosciences and Society finds local sponsor



Photo by Meij Britt Heinsen

The Heidelberg Forum on the Biosciences and Society hosts a wide range of speakers. Rudolph Jaenisch spoke on cloning and embryonic stem cell research in October 2003.

Manfred Lautenschläger, the founder of MLP – a financial service provider and one of the largest publicly traded companies in Germany – has pledged generous financial support for the Heidelberg Forum on the Biosciences and Society for 2004 and 2005. The Forum was launched two years ago when four leading research institutions in Heidelberg decided to join forces to promote the public understanding of science. It consists of a series of public lectures organized for the benefit of a variety of audiences in Heidelberg. The supporting institutes include EMBL, DKFZ (the German Cancer Research Centre) as well as two partners from the University of Heidelberg: the

Centre for Molecular Biology (ZMBH) and the Medical Faculty.

From the beginning, the HD Forum has benefited from strong support and encouragement on the part of Heidelberg Lady Mayor Beate Weber. Thanks to her intervention, Manfred Lautenschläger – an active supporter of many different types of initiatives – has generously offered to provide the necessary sources of funding to cover the bulk of the costs relevant to the Forum over the next two years. Previously, financial support of these unique science communication activities in the region had been shared by the collaborating research institutions, and by important contributions from Boehringer Ingelheim Foundation and Cellzome AG.

A forum for molecular biology's grass roots: ELSO in Dresden, 2003

More than 2,000 life scientists gathered in Dresden, Germany, on September 20-24; the occasion was the joint Year 2003 Convention of the European Life Scientist Organization (ELSO) and the German Society for Biochemistry and Molecular Biology (GBM). The event brought together scientists from a range of disciplines for an intensive week of scientific talks and discussions.

The ELSO/GBM conference is the only gathering of its size for molecular biologists in Europe. It provides an important opportunity for researchers working on different aspects of life sciences to exchange information and establish connections.

"The life sciences are at the threshold of a post genome era in which the borders between the disciplines will fade," says EMBL alumnus Kai Simons, currently director of Dresden's Max Planck Institute for Cell Biology and Genetics, and president of ELSO. "We have to bring researchers and scientists from many different fields together when we want to network and utilize their cumulative knowledge."

Highlights of the meeting included a keynote lecture by Sydney Brenner and a major poster exhibition which gave scientists and industry plenty of opportunity to exchange ideas. Another key focus was careers in science.



Photo by Ingeborg Fatscher

An ELSO Conference attendee visits the EMBL stand to find out the latest developments at the Laboratory.



Seeing over the Great Wall

Some months ago EMBO announced that it had entered into an agreement of co-operation with the Chinese Academy of Sciences. Since then a number of exchanges have taken place between Europe and China, supported by the EMBO World Programme. Now a new service has been announced by EMBO that will address one of the most frustrating problems faced by researchers in search of skilled scientists for their laboratories.

Researchers frequently receive e-mails from scientists in China and other countries with PhDs who express an interest in working in their laboratories. Because of differences in

educational systems, it is often difficult to evaluate the quality of these candidates. That fact, combined with the great distances involved, may mean that we don't take a close enough look at applicants who would be great assets to our work – and to European science.

EMBO hopes to address this problem for the case of China. If the head of a laboratory has found a potentially interesting candidate, he or she can turn to the new service for help. The researcher can ask the applicant to agree to participate in an evaluation procedure that will be managed by EMBO. This will involve completing documentation, supplying references, *etc.* The materials will go to the Chinese Academy of Sciences for an evaluation from their perspective. Simultaneously, EMBO members will conduct an evaluation. These two steps will provide the basis for a decision on whether it is worthwhile to pursue the application with an interview. EMBO will then organise an interviewing panel consisting of EMBO Members who will visit China, where they will screen numerous applicants who have applied to laboratories in the EMBO member states. Finally, a report on each applicant will be provided to the supervisor in Europe; then, of course, it is the choice of the labora-

tory whether to pursue the application or not. Costs of the project will be covered by the laboratories that participate, at a rate of EUR 150 per candidate screened.

Further details on the procedures can be found on www.embo.org/projects/world/.

There are many reasons why Europe needs to encourage more scientists from outside its boundaries to come to work here. Science is a global activity and the diversity of skills, approaches and training which come from scientists from outside the European mainstream can only enrich our laboratories. We have seen the impact of highly skilled scientists from all over the world (not least Europe!) on science in America. The scaled down version of an influx of external scientists would indeed be welcomed and timely in Europe. This EMBO service is one step to help this to happen. The closing date for researchers who are interested in using the service this year is November 1, and you are strongly encouraged to spread the word of this initiative amongst your colleagues who may be currently considering applicants from China.

– Frank Gannon
Executive Director, EMBO

Discovering the scientific literature with E-BioSci

This article is approximately 580 words. You might take 3-5 minutes to read to the end and in this time, 3-5 new articles will appear in the MEDLINE bibliographic database. Of course, not all of these may be relevant to your field of research, but then without reading them, how can you be sure? And how about the 1,400 or so that appeared yesterday ... or the day before? To be sure, despite the best of New Year resolutions and publisher's alerting services, keeping up with new literature is an increasingly difficult task, not to mention the problem of retrieving information from the 12 million published articles that form the core of the biomedical literature that has accumulated in MEDLINE since its inception in the mid-60's.

For those of you who at this point decide to stop reading and make a beeline for the library, or (more likely) your desktop computer, let me give the bottom line of this piece now. EMBO's E-BioSci project has, in collaboration with Collexis bv, a text analysis software company based in The Netherlands, recently released one of the prototype user interfaces to its literature discovery tools. This prototype is available through the E-BioSci's web-page at www.e-biosci.org. You are encouraged to try it, test

it and to give your comments and suggestions for improvement.

Is E-BioSci simply yet another bibliographic service? And if not, what makes it different? The answers to these questions will take a little more of your time and will require some appreciation of what it aims to be and how it works.

E-BioSci's literature and gene search tools are based on the principle of "conceptual fingerprinting" and they aim at semantic linkage of literature with molecular and other datasets. The generation of fingerprints starts with indexing a text. Words and phrases so extracted are subsequently matched against one or more hierarchically-organized and numerically identified concepts contained in a thesaurus. A weight factor that is determined by a combination of the frequency of occurrence of the terms and quality of the match, is assigned to each concept. The resulting numerical profiles for each document form part of the fingerprint that is stored in a searchable database. Other fingerprint data-fields contain bibliographic and other information required to identify the original document and its location to the user.

Search and comparison of fingerprints thus allow documents to be rapidly and accurate-

ly retrieved and related to each other in terms of the concepts they contain rather than the individual words they share and this represents an important advance on searches based on simple keywords and Boolean logic. Fingerprints also allow recognition and matching of gene symbols within documents and cross-language querying. Fingerprint generation is fast – about 250,000 pages of text per day. Document matching by fingerprint comparison is correspondingly fast: 500,000 can be compared in only 40 msec.

The current prototype release is still fairly limited in document content. Fingerprints have so far been generated from Medline abstracts for the period 1993-2002, but full text is still currently limited to a sample of patents from the European Patent Office's database, together with articles from about 130 journals. These are either open access (*e.g.* BioMed Central), or provided by collaborating commercial publishers.

There are many other novel and useful features built into the prototype. They are probably best sampled hands-on, so please do give it a try and do let us have your feedback.

– Les Grivell, EMBO

Welcoming the Waldpiraten camp to the neighbourhood



Photo by Maj Britt Hansen

Camp's in session

After months of hammering, painting and decorating, the construction up in the woods near EMBL's main laboratory in Heidelberg is finished, and the German Children's Cancer Foundation's Waldpiraten camp is open for business.

The camp was officially opened on Saturday, September 27. On hand to welcome the camp to the neighbourhood were Heidelberg Mayor, Dr. Bess, camp director Gabriele Geib, as well as representatives from EMBL. The 5.8 million Euro camp is funded solely by donations and occupies the clearing in the woods behind the Bierhelderhof. It houses special buildings and services, such as sleeping quarters, an activity center, arts and crafts areas, sports

facilities, a theater, as well as a medical facility with specially trained staff. The kids already held their first camp sessions in their new home this summer. When the campers are not about, the facilities will be used for other activities, such as seminars and support groups for the kids, their parents, brothers and sisters, and other family members.

The Waldpiraten camp is based on the model of the Better Days Camps founded by Paul Newman in the US. It is designed for children or teenagers who have or are recovering from cancer (because of their illness, they are often excluded from the normal 'kids' activities). Here they have a place where they can be kids again. In fact, no parents are allowed.

EMBL's involvement in the project dates back a few years when some members of the lab approached camp organizers to see whether EMBL could help out. Gabriele accepted the offer with enthusiasm, and put us to the task of cleaning up the lot in preparation for the construction. EMBL staff rallied to the cause and spent the weekend literally doing a lot of ground work.

Since then a number of activities have taken place. The camp receives no money from the

government, so fundraising is vital to the project. EMBL efforts have included a special Waldpiraten tombola held at the lab's annual summer party, as well as participation in the Heidelbergman Triathlon, where EMBLEM and EMBL-Ventures have raised thousands of Euros. EMBL's diving club has also taken an active role and each year take the kids on a special diving course. It has turned out to be a huge success and an event that the campers really look forward to.

"As the camp's neighbours, EMBL can contribute in many ways," says Ann Cooper, EMBL alumna and active volunteer. "We can offer practical advice, such as which local baker to use or how to get a mobile phone to work in the woods, or even help out with camp activities." The camp has no resident experts, so they need volunteers to organize sports activities and crafts, assist with computers or simply read a story to the younger kids at bedtime. "Most helpers are parents who have either lost a child or who have a sick child and they help out however they can," says Ann. "EMBL staff can help them, too."

Do you want to get involved? Send an email to sherwood@embl.de

Science and Society talk on bioweapons at the Hamburg Outstation

Dr. Jan van Aken of Hamburg University visited EMBL-Hamburg on September 5th to give a science and society lecture entitled "Biological Weapons in the 21st Century." Jan has monitored biological weapons proliferation and advances in weapon technology for several years, through his association with Hamburg University, Greenpeace, the Sunshine Project, and most recently through

his inclusion on the roster of the United Nations Monitoring, Verification and Inspection Commission (UNMOVIC).

During his lecture, Jan described how recent rapid advances in biotechnology, genetics and genomics have opened avenues for development of more subtle, specific, damaging, and even novel bioweapons. A second theme explored the use of published and

accessible basic biological research in weapons development, without prior knowledge by the authors and apparently with authors being unaware that their work could be adapted for use in a weapons programme. Jan cited a number of examples covering both themes and concluded that "smart" bioweapons are not science fiction but are becoming reality. — Will Stanley

Mending bumps, bruises and broken bones: EMBL first-aid volunteers learn to help



Photo by Marietta Schupp

Don't worry – she's fine! These EMBL employees are just practicing life saving

techniques as part of the Safety Office's first aid course, organized in conjunction with the *Johanniter Unfallhilfe*. EMBL first-aid volunteers spent two days in August learning how to treat bumps, bruises, and broken bones. They also learned how to handle dangerous situations, such as chemical inhalation or heart attacks. These trusty first-aid volunteers come from all over the Heidelberg laboratory and can be identified by a plaque outside their doors. So, the next time you need a band-aid, feel free to call upon them. They are there to help you.

If you want to become a first-aid volunteer, contact Corinna Gorny at gorny@embl.de for more information.



Photo by Maj Britt Hansen

Get your Christmas shopping done early this year!

EMBL t-shirts, baseball caps, mouse pads and more are now available for purchase by EMBL staff members. For price lists and instructions on how to order, see www.embl-heidelberg.de/LocalInfo/EMBLabout/shop.html

Proteins - DisEMBL yourselves now!

All multidomain proteins at EMBL are required to submit themselves for inspection by DisEMBL, GlobPlot and ELM. It is believed that research is being hampered by hidden disorder and that certain polypeptides are harbouring undetected functional sites. All proteins admitting to more than one domain shall present their sequences in any order to <http://dis.embl.de/>, <http://globplot.embl.de/>, <http://elm.eu.org/>

where secret content may be revealed. Problem proteins refusing to expose their inner selves should be taken to floor V1 for individual analysis by the BioInformatics groups installed there. Furthermore any known functional sites that are not yet catalogued in ELM must be reported at once to the authorities* in Room V101.

– Toby Gibson and the Sequence Analysis Team
*sorry, Francesca!

That movie, your application, and wicked screensavers

You've got mail. Arghhhhhh! This usually welcome message sent us screaming down the halls during the month of August as the laboratory was inundated with viruses called Lovsan, Nachi and Sobig-F. So, was Sobig really that big?

Yes, it was! E-mails citing "that movie," "your application" and "wicked screensaver" clogged the arteries of the lab's communication system, taking users to the verge of a coronary. Commenting on the incident, Toby Gibson quipped "These were exciting times. It was mesmerising watching the emails pouring into Eudora. 1,800 in two days. It made me feel important - a happening 'my-inbox-is bigger-than-yours' sort of guy. Also it meant I didn't have to answer any emails I didn't want to. I couldn't find them anyway."

So what did the lab do? The email onslaught has prompted the Computer and Networking Group to change their virus protection policy and now they block and quarantine incoming messages with specific file extensions and MIME types. This helps to stop new viruses that haven't yet been identified by virus authorities, Network Associates and Sophos and incorporated into the lab's scanning system. If you receive an infected email, the CNG will let you quarantine it, but let you know, so that you can retrieve it if you need to.

What should you do? The worst seems to be over now, as email traffic has returned to normal. To preserve lab sanity in future, try to avoid opening suspect files and use the filters that come with your email software.

EMBL volunteers organize development programmes

In the April issue of *EMBL&cetera* we told you about EMBL postdocs Emmanuel Reynaud and Jez Simpson who traveled to Africa to help set up a community health center. In the weeks after their story was published, Emmanuel and Jez gave a 'science and society' talk about their adventures for EMBL staff. Apparently their efforts served as inspiration for others to get involved in similar activities. *Adequation*, the organization that Emmanuel works with has established a base in Germany with the help of some EMBL volunteers. Here are some new initiatives:

EMBL Director-General Fotis C. Kafatos has authorized the collection of unused equipment, scientific journals and books for the University of Elbasan in Albania. EMBL research groups may donate items under specific conditions: for example, they must not be expected to be used at the lab within the next three years, EMBL will not be able to provide replacement equipment because of the collection, and donations must be checked with EMBL's finance department to make sure they satisfy the Laboratory's

rules and regulations. If you have anything to donate (even old computers and school books at home), please contact Emmanuel, Jez or Richard Carmouche.

PhD student Tetyana Klymenko is helping to organize an upcoming EMBO teacher's workshop on biology in Slima, Ukraine. Schools in the Ukraine don't often have basic lab equipment, so she approached Emmanuel for help. He managed to gather microscopes, centrifuges and other supplies from colleagues in France, and now the teachers will have everything they need.

Birgit Schramm and friends are working with universities in Eastern Europe to establish programmes that provide education services to local communities about issues such as AIDS and drug use.

Sophie Chabanis-Davidson is helping to develop *Adequation's* website, which will provide information on the organization's development programmes across the world.

Want to help? To get involved, send an e-mail to Emmanuel at reynaud@embl.de.

news & events

What's all that construction outside the EMBO building?

It's a building to house a new electrical transformer. The laboratory's electricity consumption has increased over recent years, and a fortified electricity supply was high in demand. New lines were laid and the transformer was built to manage the supply to the Annex Building and Containment. Gene Expression programme scientists certainly couldn't go on unplugging the washing machines every time they wanted to turn on their computers! The new building will be finished in November, and will be discreetly hidden among the greenery between the EMBL and EMBO buildings.

from the Szilard Library... Back issues of *Nature* have been added to EMBL's growing collection of e-journals. All sites now have access going back to 1987.

With the motto "We sweat, you pay!" a team of intrepid sportsmen and women from EMBLEM and EMBL-Ventures swam, ran and biked their way through Heidelberg in the city's annual "HeidelbergMan" triathlon. With a time of 2:48:56, they crossed the finish line in 67th place. In doing so, they raised the impressive sum of 6,125 Euros for the Waldpiraten camp for kids with cancer (see page 6).

October 13th marks a key event in the history of scientific publishing – the launch of *PLoS Biology*, the premier open-access journal from the Public Library of Science. In addition to all the usual attributes of a top-tier journal – rigorous peer review, cutting edge articles, high-quality production – *PLoS Biology* is also free to anyone with an Internet connection. This first issue of *PLoS Biology* features 9 major research articles covering topics ranging from elephant conservation and bacterial genome evolution to malaria and cell signalling.

Ever considered working in Scotland? www.talentscotland.com, a website managed by Scottish Enterprise, offers a wealth of news and job opportunities for life scientists who would like to work and live in the land of bagpipes and haggis. Aye, lads and lassies, check it out.

lost & found



Have you seen this? It disappeared from the canteen in mid-September. If found, please return. Reward.

people @ EMBL



Lars Steinmetz is a new interdisciplinary Group Leader in EMBL's Gene Expression and Developmental Biology Programmes. Lars obtained his PhD in 2001 from Stanford University in California, where he continued as a postdoc at the Stanford Genome Technology Center until coming to EMBL. As a graduate student he studied the genetic basis of complex, quantitative traits and during his postdoc developed high-throughput methods for defining the components of the yeast mitochondria.

At EMBL he will continue both endeavours and further develop and integrate functional genomic approaches to better our understanding of how genes influence phenotype in health and disease.

Faculty appointments: Manuela Lopez de la Paz has been promoted to staff scientist in EMBL's Structural and Computational Biology Programme.

awards, honours & cetera

EMBL alumnus **Denis Duboule**, group leader in EMBL's Developmental Biology Programme from 1993 to 1998 and currently professor at the University of Geneva, has been awarded the Marcel Benoist Foundation's prize for 2003. The 100,000 Swiss franc prize is one of Switzerland's most prestigious awards and was given in recognition of Denis' contributions to the understanding of molecular mechanisms of vertebrate development. For more information, see www.marcel-benoist.org

Giuseppe Testa, a predoc in Francis Stewart's group from 1997 to 2001, has been awarded a Branco Weiss "Science and Society" fellowship from the ETH in Zurich. This new fellowship programme allows recipients to pursue novel issues at the interface of science and society. Giuseppe, currently at the MPI for Molecular Cell Biology and Genetics in Dresden, will focus on how new technologies change our perception of the human body, the notion of biological fate and our image of what it means to be human. His project will examine the wider impact of stem cell and genome engineering technologies from an ethical, economic, legal and artistic perspective.

Alexander Picker and his team of scientists and software engineers has been awarded third prize in LION bioscience AG's annual Klaus Sprockamp Award. The prize is in recognition of the bioinformatics software components that the group developed while Alexander was at LION. He left the company in April 2003 to take up his current position as an Education Officer at EMBL's European Learning Laboratory for the Life Sciences (ELLS).

FAQs from the personnel section

Reimbursement of expenses

WILL THE COSTS BE REIMBURSED WHEN I TRAVEL TO MEETINGS AND CONFERENCES?

You need prior approval from the budget holder who will meet the costs of travel on EMBL business. We reimburse the fares by the most economic means of transport taking into account time and cost. Overnight hotel accommodation is also reimbursed up to a maximum limit. The use of taxis is reasonable in some circumstances. For example when public transport is not available or you arrive late at night in an unfamiliar place. Higher hotel charges are also payable on some occasions. Examples include the hotels where conferences are held or when no cheaper alternative is available. Please attach the tickets and receipts to the reim-

bursement claim as proof of payment. It helps us to process the payment quickly if you record on the form the reasons for using taxis and hotels above the limit.

CAN I OFFER HOSPITALITY WHEN VISITORS COME TO THE LABORATORY?

You can take visitors out for meals with the prior approval of the budget holder. We reimburse the costs up to a maximum amount per head. The Director General can authorise higher amounts for special guests. Please obtain authority in advance otherwise you may have to pay the difference. Please list all the guests on the reimbursement claim and attach the receipts to the form as proof of payment.

For questions about this or other topics, email [Annabel at goulding@embl.de](mailto:Annabel@goulding@embl.de)

Who's new?

Ioannis Amarantos (Ansorge), Heidi Arling (Monterotondo), Angelika Bartmann (LAR/Transgenic Service), Gian-Carlo Bellenchi (Witke), Aleksander Benjak (Knop), Ambra Bianco (Ladurner), Melanie Blumenfeld (Personnel), Valeria Carola (Gross), Monica Campillos Gonzalez (Bork), Emmanuel Caussin (Vernos), Ana Cuadrado Garcia (Nebreda), Alexandru Denes (Arendt), Giuseppe Di Martino (Zhu), Emily Dimmer (Lehvaslaiho), Malgorzata Duszczak (Sattler), George Easow (Izaurrealde), Marcus Ennis (Apweiler), Andriela Feijao (Brunner), Margot Freund (Kinderhaus), Sylvain Gaudan (Rebholz-Schuhmann), Fabian Glaser (Thornton), Filip Glavan (Conti), Matyas Gorjanacz (Mattaj), Marina Granovskaia (Steinmetz), Andreea Daniela Gruia (Rørth), Gabriele Jag (Kinderhaus), Eoghan Harrington (Bork), Oguz Kanca (Rørth), Janina Karres (Cohen), Nicolas Le Novère (Group Leader), Erwan Lejeune (Ladurner), Ari Loytnoja (Goldman), Cameron Mackereth (Sattler), Jeanne Moriniere (C. Müller), Norbert Müller (ELLS), Maxim Nekrasov (J. Müller), Marialuisa Pellegrini-Calace (Thornton), Fabiana Perocchi (Steinmetz), Matthieu Pichaud (Russell), Maria Polycarpou-Schwarz (Izaurrealde), Stephen Rea (Akhtar), Stefan Reinelt (Scheffzek), Silvia Santos (Ladurner), Eugene Schuster (Thornton), Anja Seybert (Wilmanns), Jochen Stadler (Neumann), Evangelia Stamataki (Neumann), Marion Steinbuechel (Kafatos), Chris Taylor (Zhu), Rolf Thermann (Hentze), Flavio Zizzo (Monterotondo)

events @ EMBL

7-8 November 2003

EMBL Heidelberg

6th EMBL Symposium on Molecular Medicine: Defects of secretion in cystic fibrosis and other diseases

20-22 November 2003

4th EMBL International PhD Student

Symposium: A life of encounters - Recognition in biology

12 December 2003

EMBL Heidelberg, Forum on Science & Society
Abdulaziz Sachedina (Dept Religious Studies,
University of Virginia)

Islamic perspectives on cancer genetics and gene therapy

For more events, see

www.embl.de/ExternalInfo/todayAtEmbl/

Mark your calendars!
The date for the next annual joint EMBL-Staff Association summer party has been set for Saturday, 3 July, 2004.

A newcomer's survival guide to EMBL

Being a newcomer at EMBL Heidelberg can be a daunting thing. You have to navigate your way through a maze of buildings on a sign-in sheet treasure hunt, collecting lunch cards and passport photos along the way. You also have to deal with setting up camp in a new city in a new language, which can be a challenge. On the occasion of the arrival of the new class of predocs, we thought we'd survey some of the lab's not-so-newcomers and pass on some helpful hints. We begin with some frequently asked questions...

In Heidelberg...

Do I have to register as a resident with the local authorities?

Germans do. Theoretically, non-Germans with a *Sonderausweis* (special residence permit for EMBL staff) don't have to, but the City of Heidelberg might kick up some fuss and send you a letter. In principle, there is no disadvantage to registering, so you might want to consider it. If you buy a car, or want a special parking permit, you'll definitely have to register both the car and yourself.

How do I open a bank account?

Go to one of the major banks (Commerz, Deutsche, Dresdner, Sparkasse, etc.). Take along your passport (national ID card for EU citizens) as well as a copy of your employment contract. Consider getting on-line banking with your account: opening hours vary from bank to bank, and they are hard to reconcile with a normal working day. Remember that in Germany credit cards and cheques aren't accepted as often as in other countries. An EC debit card or cold hard cash is usually your best bet.

How do I find a place to live?

Upon your arrival, you'll probably be housed in one of EMBL's handy dandy guesthouses. (Read more about the ISG in the interview with Irina Dolchikova on the flip side.) Once you're ready to cut the cord and move out, ask around. The best housing information is usually word of mouth. You can also look for signs around the lab posted by EMBL leavers offering their accommodation to newcomers. EMBL has a housing service with good deals, so check the boards at the cafeteria and the main entrance regularly, or the website www.embl.de/ExternalInfo/HousingService. The newspaper is always a good bet, and offers appear in the Wednesday and Saturday issues of the *Rhein-Neckar Zeitung*. Make sure a German speaker is nearby to decipher abbreviations, such as "IZKB möbl." Be prepared to call potential landlords early and move fast. Good offers are gone in no time flat. If you choose to go through an agent, be prepared to pay as much as 2.5 months' rent in fees.

What are those little green boxes hidden in the bushes on the side of the road that make pretty flashes?

Speed traps. They're diabolical machines, and they'll get you every time. Your *Sonderausweis* won't help you. You'll have to pay the fine. So slow down...

At EMBL...

Do I really need to fill in the whole sign-in sheet?

Yes. The sign-in sheet helps departments gather information that they need to do their jobs. It's also a good test of your navigation

skills and allows you to meet the people in your neighbourhood, in your neighbourhood, in your neighbourhood...

What do I do if I lose my EMBL card?

Get another one quick! That little piece of plastic is your lifeline at the lab. Without it you can't eat, drink or get back in after 7 pm.

Who can I play football/tennis/chess/music/parcheesi with?

EMBL's Staff Association sponsors a whole slew of activities, including sports and special interest clubs. They also have equipment such as sewing machines and boules sets available on loan. The Staff Association serves as the tie between staff and administration on many important issues, so get to know them. Ann Thüringer is your contact, and she can be found in room 330, across from Switchboard.

What's that mysterious elevator stop between the first and second floors above the Operon?

Nobody knows.

Who's the guy in the office in the middle of the lab?

That's Fotis C. Kafatos. He's your boss. And your boss's boss. He's a nice guy. Greek. Say hello to him when you have a chance.

Especially for predocs...

Where do I find a mop and bucket to clean up the mess in the Operon Foyer after the predoc party?

Ask Frau Stenzel.

Miscellaneous...

What's the cheapest way to call home?

www.billiger-telefonieren.de has a list of service providers charging the lowest rates and is updated daily. If you make personal calls from EMBL, remember to dial your personnel number first.

What's the cheapest way to get home?

If you come from afar, Heidelberg is well connected for cheap flights. Discount airlines such as Ryanair fly from Frankfurt Hahn or Karlsruhe Baden airports and can offer great deals. Otherwise check with your travel agent to get cheap deals other airlines are now offering. If the train is your preferred mode of transport, a *bahncard* is essential. For those who are attached to their cars, put up a note on the boards around the lab and see if anyone else is going your way. Chances are you can carpool to share costs.

Where can I find bucatini to make pasta all'amatriciana?

You can't. Have your mother send them to you instead.

Much of the information presented here can be found in the "Predocs 2003 Survival Guide," available at <http://forums.predocs.org>

who's who



Tiziana Novarini
Predoc Secretary

She'll help you with all your predoc worries. Very helpful, a good listener...



Raffaele Totaro
Switchboard

He and co-worker Heike deliver your letters from home and sell you tokens for the washing machines.



Claus Himburg
Chef Extraordinaire

He serves your lunch, so be nice to him.



Jörg Graf
Petty Cash

He gives you your EMBL card so you can have your lunch. Be nice to him, too.



Regina Herhoff
Librarian

She and her colleagues will help you with your literature searches and send friendly reminders when your library books are overdue.



Arno Ulrich
Night watchman

He'll let you back in to your locked lab during the wee hours and periodically checks up on you to make sure you're still breathing.

The top ten things newcomers should know when they start at EMBL

- 10 Make a point of going to the weekly pink seminars given by EMBL group leaders. It's a great way to learn what other people are doing in the lab. (Jochen Wittbrodt, Group Leader)
- 9 Don't forget to venture out beyond the safety of the Hauptstrasse in Heidelberg. Mannheim, for example, has some lovely Turkish restaurants. (Aidan Budd, Gibson group)
- 8 Avoid the falafel in the canteen. (Anyone who ate it in August 2001)
- 7 Remember that the day you get your pay slip is not necessarily the day your salary appears in your bank account. This will help you avoid nasty surprises. (Erika Grzebisz, Wittbrodt group)
- 6 Make sure you get a copy of the Rules and Regulations and READ them! They are your roadmap for navigating the "laws" that govern life at EMBL. (Ann Thüringer, Staff Association)
- 5 Don't break a tooth for the first two years you are at EMBL. Not all medical exthpentheth are covered by Intermedexth. Find out what ith and what ithn't at www.intermedex.de. (Barbara Di Ventura, Serrano group)
- 4 Remember that at EMBL you can speak any language you like, providing every sentence has words from at least two languages in it. When you speak to somebody who works on *Drosophila*, you should say the names of proteins really LOUD, to show that you are capitalizing the first letter. You don't have to lean to one side when talking about RNAs, to show that you are italicizing them, but most people do. (Russ Hodge, resident linguist)
- 3 Champagne bottles are opened when a paper gets accepted. Whisky and harder stuff are the medicine of choice to deal with rejections.
- 2 What should I do if I find a *Drosophila* loose in the lab? Capture it very carefully without climbing on shelves or computer monitors. Try not to disturb the eyes, wings, or antennae; these features help us sort it back into the right tube. If the little devil is too fast, try to attract it with a ripe banana, or the "Tropical Fruit" screen saver on your Mac. Once you have it, pack it into an empty coffee cup and deliver it to the fly room. Return the cup to the cafeteria. If all else fails, call the fly SWAT team.
- 1 How do I get my own column in EMBL*&cetera*? First you have to find our e-mail address or the way to our office. We have very stiff deadlines: articles are due five minutes after they are assigned. You have to be able to write in something resembling English. Don't use the "highlight corrections" feature while typing articles. Once we forgot to turn them off during printing, and the newsletter was 312 pages long.

Not everyone who works at EMBL works in a lab...

It's not a commonly known fact that the folks who work at the Guesthouses and the ISG hotel are also EMBL employees. Take Irina Dolchikova, for instance. The native of one of Heidelberg's sister cities, Simferopol in the Ukraine, works as a cook and service employee in the Bistro at the ISG.

How long have you been in Germany?

I came to Germany in 1998 with my husband, two sons, daughter-in-law and granddaughter. I've worked at the ISG for four years.

Did you speak German when you came?

No. I learned German at the Pädagogium language school and then took a professional course in cooking and service. Part of that course was an internship at the ISG. Sabine Lehninger offered me a part time job when it was over. I turned it down because I needed to work full time. My husband was unemployed at the time. At home I said to my husband, "What have I done? I've made a terrible mistake!" Here was a good job offer and I was determined to work, didn't want to take welfare. But a wonderful thing happened. Mrs. Lehninger called me the next day and said I could work full time. The first year was very difficult. I didn't understand anything! I had been a cook in the Ukraine, but didn't know any of the words in German. My supervisor would say, "Irina, go get a baguette." Baguette? What is a baguette? But my colleagues were very patient. They would say, "It's bread, Irina, you know, the long bread." At the end of the day not only were



Irina enjoys a cup of tea as she takes a break at EMBL's ISG hotel.

my feet tired but also my head! But now I understand almost everything, even some dialect, and can work much faster.

Have you had any amusing experiences with the guests?

Three weeks ago I was working alone in the Bistro because my colleague was on holiday. A Japanese family came in and the father wanted to order something. But he couldn't speak German and I don't understand English! So I tried sign language, asking if he wanted this or that. Finally it occurred to me that with two children he probably wanted something to eat. So I asked "num, num, num?" while making eating motions, and he bowed. We had understood each other. But now I'm trying to learn a little English! We have many guests who don't speak German.

Why did you come to Germany?

We wanted a normal life for our children. In the Ukraine even people like engineers only get a paycheck every two or three months. We had no heat and had water only once a week. I would fill the bathtub and every spare container with water. Here everything is so clean and correct. When Germans complain that life is hard, I tell them "You don't know what a hard life is." This is a good life here, one only needs work. My friends asked me if I'm satisfied here. I said yes, but it is as if I have had two souls, two lives. My first life was in the Ukraine and my second life is here. I can even imagine a third life in another country, maybe the U.S.

— interview by Ann Thüringer

EMBL provides a number of housing services to short and longer-term visitors. The International Seminar and Guesthouse (ISG) is a fully functioning hotel with 51 rooms fitted with ensuite bathrooms, cable TV, radio, direct dial telephone and a private balcony. Other services include a sauna and fitness room, conference rooms, a bistro and beergarden. The Im Eichwald and Boxberger guesthouses provide a home to longer-term visitors to the lab. Apartments range from 1 to 3 rooms, and each has a fully equipped kitchen and a private balcony. The guesthouses are located just a few minutes' walk from the lab; those who can't face the walk up the hill in the morning can hop on the shuttle bus which will ferry them to the lab and back home again in the evening. How's that for convenience? For more information, see www.embl-heidelberg.de/ExternalInfo/guesthouse/