

EMBL establishes technology transfer company

On May 26, 1999, EMBL Enterprise Management Technology Transfer GmbH (EMBLEM) was formally established as directed by Council. Its mission is to optimize EMBL's return on intellectual property through marketing of licenses and facilitating start up companies. Since January 2000, all licensing activity has been performed through EMBLEM.

EMBLEM is fully owned by EMBL, though at arm's length. This allows EMBL to preserve its character as a basic research institution. It allows certain risks to be shifted from EMBL to EMBLEM, such as those which may arise from product liability in the course of licensing patents. This shifting of liability may also be important in consulting arrangements, which also may be performed through EMBLEM at the staff member's option.

The interim Managing Director of EMBLEM is Professor Bernhard Hirt. He will be succeeded in November by a permanent Managing Director, Gabor Lamm. EMBLEM has a Supervisory board of seven members: Peter Gruss (Chairman of Council), Max Herzberg (Israel), David Owen (MRC, UK), and Christian Boulin, Iain Mattaj, and Luis Serrano as internal members. The board has already met two times this year to approve company procedures and contracts and to provide advice on several start-up companies planned by EMBL staff members. They have given enthusiastic support for the idea of an incubator facility adjacent to EMBL and which is pending Council approval in November. Steve Ferris, who continues as EMBL Technology Transfer Officer, is the Chief Scientific Officer of EMBLEM.

The Technology Transfer Office and Technology Transfer Committee at EMBL have adapted somewhat now that EMBLEM is a reality. The Technology Transfer Office will continue its role in identifying patentable ideas (including copyrightable software), assisting group leaders in filing and maintaining patents, and all other matters pertaining to intellectual property. The Technology Transfer Officer will work closely with personnel from EMBLEM and its Board. The Technology Transfer Committee will continue its important role in formulating policy about EMBL intellectual property, assessing the patentability of inventions, resolving conflicts of interest etc.

EMBLEM is located at Boxbergering 107, D-69126 Heidelberg.

—Steve Ferris
page 2



Drawing through a child's eyes...

The EMBL Kindergarten hosted an art exhibit in the EMBL Canteen, exploring the larger theme of how people learn to draw. Children learn this skill largely by themselves – yet there are often strong similarities between the pictures produced by children of the same age. How psychologists regard the development of drawing skills is the subject of this issue's column *from the sister sciences*.

page 10

EMBL's alumni get the stamp of approval

EMBL's alumni association has now been legally established under German law. Angus Lamond, acting president, talks about some of the association's hopes and plans.

page 6

Wellcome Trust announces major support for Ensembl

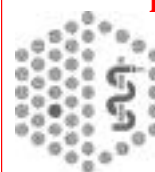
The U.K.'s Wellcome Trust has announced that over the next five years, it will provide major funding for the Ensembl project, a collaboration between groups at the EMBL-EBI and the Sanger Centre in Hinxton. Ensembl is a database and set of software tools designed to automatically annotate sequence data from human and other genome projects. The news comes as a relief to the EBI, which has suffered from cutbacks under the EU even as the demand for bioinformatics services is rising at a dramatic rate.

page 8

Contents

<i>Technology Transfer</i>	2
<i>Alumni @ EMBL</i>	6
<i>The EMBO Corner</i>	9
<i>from the sister sciences</i>	10
<i>People @ EMBL</i>	14

Molecular medicine minisymposium



Pathogen-Host Interactions

Heidelberg, Oct. 30-31

A vision for technology transfer at the EMBL

This document was originally part of the Director General's presentation to Council at the July 2000 meeting.

Status and preliminary proposals to Council regarding technology transfer at EMBL

by Fotis C. Kafatos

Transfer of technology to industry is consistent with EMBL's mission, and was in progress for over two decades, but has been substantially encouraged in the last five years in consultation with Council. Significant steps were the establishment of a Technology Transfer Committee (1996) and Technology Transfer Office (December 1997), publication of the internal guidance note on Technology Transfer in December 1997 with revision in January 2000, a decision to accept equity when appropriate in exchange for EMBL technology, and the establishment of EMBLEM (May 1999). These steps and top-level engagement in their guidance raised the interest of EMBL scientists enormously, not only from the instrumentation area where it was always significant, but also across the Laboratory's Units. A powerful stimulus came from the obvious success of LION bioscience AG, a company that was started by an impressive external entrepreneur following an initiative of W. Ansoorge, and with input of technology and scientific personnel from our DNA sequencing and bioinformatics groups. This report is an updated version of the report presented to and endorsed in principle by the EMBL Council on July 5, 2000.

impressive range of inventions. In 1999, the Technology Transfer Office received 35 invention disclosures of which 23 have resulted in a patent filing. Included are joint patent applications with DKFZ and Transgene. Costs of individual patents are normally taken up by licensees when they are licensed exclusively. This is already envisaged for at least 7 patent applications. In the first 6 months of 2000, 15 disclosures have resulted in 11 patent filings. In the past 18 months, 4 patents have issued and two patent applications were dropped.

With a few exceptions all licenses have been transferred to EMBLEM. EMBL received licensing income from 30 companies in 1999, with approximately 80% of this income derived from EU countries. Bioinformatics continues to be an important source of income. The SWISS-PROT license has generated significant revenue which is used exclusively to expand the SWISS-PROT team at the EBI, as the license agreement stipulates. LION sales of SRS have generated royalty for EMBL. Non exclusive licenses were written for the SMART annotated database, Clustal W, FSSP, and the wARP protein structure analysis package. ReclBD has been exclusively licensed to two companies, for animal and plant transgenics, respectively, and ET Cloning has been licensed non-exclusively to 8 companies.

foreseen, except it was mutually agreed that negotiations that were far advanced at that time remain the responsibility of the EMBL management team, with informal input provided by EMBLEM when appropriate. This relates to the formation of two start-up companies, CellZome and Anadys, which are led by an experienced external management team (as in the earlier case of LION). Other start-ups under formation in which EMBL participation is foreseen are Cenix which will be moving to Dresden near the new Max Planck Institute, GeneBridges which expects to relocate within a year, and Elekta which expects to start with intellectual property from another institution but wishes to be located near EMBL, from which future technology transfer is foreseen. It should be noted that CellZome is already renting and using the incubator space that EMBL had constructed with Council approval (in November 1999) in previously shell space. This is now generating income to offset the construction costs, as foreseen. Cenix is also using previously shell space that they refurbished and will leave for EMBL use when they depart.

The EMBLEM Supervisory Board has met three times thus far, on April 10, July 20 and September 28. In addition to formal steps that were taken to fully activate the operation of EMBLEM, Professor Hirt and the Board together with the Director-General selected Dr. Lamm as Managing Director. The composition of the Supervisory Board is Dr. Max Herzberg (Chair), Dr. David Owen (Vice-Chair), Prof. Peter Gruss (Chairman of EMBL Council), Dr. Sakari Karjalainen (Chairman of the EMBL Finance Committee) and Iain Mattaj, Christian Boulin and Luis Serrano.

The EMBLEM Board and Managing Director and the Director-General have discussed extensively the perspectives of technology transfer from EMBL. The Board viewed the opportunities as substantial, and strongly argued in favour of investment into two key tools for proper exploitation: an Incubator facility and an

Current income and assets

Technology transfer cash income for 1999 (largely from licensing) was 1.1 MDM. Accounting for technology transfer in 1999 should also recognize the acquisition of shares. EMBL now holds or is due shares in six companies: LION Bioscience AG, Develogen, GeneBio, Ribozyme Pharmaceuticals, MWG and CellZome.

The encouragement of Technology Transfer activities has resulted in EMBL scientists submitting for consideration an

EMBLEM Technology Transfer GmbH

We are grateful to the interim Managing Director of EMBLEM, Prof. Bernhard Hirt, who helped set up and oversee EMBLEM in its start-up period. He is scheduled to step down in late October, when the newly recruited Managing Director, Dr. Gabor Lamm, takes up the post. EMBLEM manages the EMBL technology transfer since 1 January 2000, as

Investment fund. A joint letter from the Chair and Vice-Chair of the Board summarizes the arguments (see box). The two concepts were endorsed in principle at the July meeting of Council. The EMBL and the EMBLEM Board discussed in depth the various options at the Board's successive meetings, permitting the drafting of final proposals which will be circulated in advance and discussed with Council at the November meeting.

The perspective of both EMBL and EMBLEM is to encourage business development both locally (in the communities where EMBL's various Units are located) and in other member countries. The discussions have identified useful tools for distributed technology transfer, such as a Technology Fair, brokerage events and provision of access to the Incubator services for similar structures in Member states that may wish to use this opportunity. Most start-ups normally are incubated near their key founders, but at EMBL subsequent dispersion can be anticipated because the scientists themselves relocate through turnover. Indeed, this is already planned for Cenix and GeneBridges. Furthermore, while LION is headquartered in Heidelberg, it has already established affiliates in the Cambridge area (UK) as well as Boston, USA.

Potential investments in the future of technology transfer

The Incubator facility

Suitable land surrounding EMBL (and reserved for it) is available. In its simplest form, the Incubator would be new office and laboratory space separate from EMBL but adjacent to it; it would be built in the form of flexible modules to be leased to companies that may differ widely in size and requirements. In a more sophisticated version, linked with the parallel creation of an EMBL Technology Transfer Fund (see below), the Incubator would additionally house EMBLEM itself and associated financial and managerial services, to facilitate the process of technology transfer and company formation. Some of the services would be addressed specifically to companies setting up locally (e.g. Internet provision), but many would be useable whether the technology transfer is made locally or elsewhere. The latter type of services could also address the needs of start-ups that relocate elsewhere, joint

projects between EMBL and entities in the member states, and potentially the needs of some institutions of member states that might not have access to comparable local services.

The establishment of an Incubator facility is extremely urgent. The small amount of space generated by EMBL last year is already fully occupied, one of the occupants is planning for substantial expansion, and several additional start-ups are queuing for space that would be a prerequisite for their starting to operate. Alternative options in the Heidelberg area are very scarce, and the new extension of the City of Heidelberg Technology Park is already booked. The most pressing needs will have to be addressed by the setting up of containers (port-a-cabins) in the latter part of this year. The costs for set up and port-a-cabin rental

will be covered by rental commitments that the companies are prepared to make.

In parallel, the Laboratory is developing plans for a permanent technology transfer building complex on the left side of Meyerhofstrasse, facing the Operon and going into the forest. A first phase of 6,000m² with associated underground garage is envisioned. It could be built within 24 months, and could house companies and services with a total of 300 employees. Existing bids, if accepted in full, would result in full occupancy of this building. However, it would be prudent not to commit more than 50% of the available space to any one single company, so as to maintain space options for new start-ups. Application of this rule would mean that 72% of the Phase I space would be precommitted. It is possible to plan Phase II in parallel (8,000 m²),

EMBLEM

EUROPEAN MOLECULAR BIOLOGY LABORATORY ENTERPRISE MANAGEMENT

Boxbergering 107, D-69126 Heidelberg, Germany

27 June 2000

Dear Fotis,

We are aware that you will be informing the EMBL Council at their upcoming meeting about progress in establishing EMBLEM, and the outlook for the future. As Chair and Vice-Chair of the EMBLEM Supervisory Board, we wish to put on the record the Board's conviction that, to develop fully EMBL's potential for technology transfer, EMBLEM will need to have at its disposal two essential tools: an investment fund, and incubator space. These requirements were discussed at the first meeting of the Board in April, and we look forward to a more concrete discussion of options at the July Board meeting. In the interim, please feel free to communicate to EMBL Council the Board's position, so as to facilitate the future steps.

The necessity for a fund is a direct consequence of EMBL's nature as a basic research laboratory. Discoveries made at any of EMBL's sites may be of great potential, but frequently will be far from immediate commercial utility. Even if they could be licensed immediately, the return would be substantially lower than if the technology could be developed to become more robust and achieve proof of principle. In cases where a start-up company is the appropriate vehicle for commercialization, availability of funds to reinforce the intellectual property position and then provide seed funding would substantially improve the share of equity that the Laboratory could obtain.

The necessity of incubator space in Heidelberg is particularly acute for the same reasons (early-stage technology), but also because that is where most of the wet biology of EMBL is concentrated, laboratory space is in short supply, and EMBL is situated at some distance from the city's technology park. Availability of separate but nearby space will permit EMBL scientists to participate in company formation without disrupting the life of their research laboratories. As you have informed us, the small amount of incubator space that you were able to provide in previously available shell space was instrumental in launching two start-ups recently, and a couple of pending start-ups are queuing for space. One of the new start-ups will be moving to Dresden, but the other is strongly interested in expanding locally for the next few years.

In our experience from the UK, Israel and elsewhere, a serious commitment of a major institution such as EMBL to technology transfer requires investment fund and space. We look forward to working with EMBL to make plans in this direction in a timely and professional manner.

With kind regards

Yours sincerely,

Max Herzberg
Chair

David Owen
Vice-Chair

cc: Prof. B. Hirt, Managing Director EMBLEM

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reserving for 2001 the decision concerning its actual construction, depending on the then confirmed demand.

The preliminary plans were outlined to Council at the July meeting. A full feasibility study including design, costing, projected demand and financing is being prepared in consultation with EMBLEM for consideration at the November meeting of Council. The planning and building permit acquisition process are being brought to the point that construction of Phase I could start immediately if Council approves, thus gaining a whole construction season (which would be lost if foundations are not prepared before winter sets in). Some interim construction will take place ahead of November Council, to ensure that parking spaces will not be reduced when construction starts. Indeed, the construction will include sufficient parking space to alleviate the current shortage.

EMBL Technology Transfer Fund (ETTF)

The value of Investment Funds for facilitating technology transfer for major research institutions is well established. For example, the Vice-Chair of EMBLEM heads such a fund for the MRC, and the Chair also has experience in this area, as well as in running an Incubator. The EMBL management does not have pertinent expertise, but has experienced numerous situations in managing the technology transfer process from EMBL in the last few years, in which the availability of "internal" investment opportunities could have made a big difference: for timely development of promising technology, to the point that it becomes actually attractive to investors and thus secures considerable added value for EMBL and the scientist founders. We can also easily understand the value of a fund in efficiently providing EMBL-associated start-ups with a package of services relating to management and business development, identification of sources of financing as well as access to operational infrastructure. An important function of such a fund would be to evaluate professionally any opportunities for investment, especially at the seed and initial funding stages, thus further increasing the returns on EMBL technology.

In summary, the provisional concept is for a fund that:

- helps in the development of early-stage technology
- adds value through services housed in the incubator facility

- potentially provides start-ups with seed and initial growth funding, after due diligence.

We strongly support the proposals of the EMBLEM Board for developing such a fund, and have incorporated their guidance in designing it for consideration by Council.

Financial implications

A compelling case can be made for investing in the manner indicated above in the future of technology transfer for EMBL. Needless to say, we take it as granted that the investment cannot come from the resources given by the member states to EMBL for its scientific programme. While other public funds, such as governmental subsidies, would be welcome, over-reliance on them could prove unwise in terms of the autonomy of technology transfer decisions.

It is advisable and legally necessary that the proposed incubator building, on land made available for EMBL, be owned by EMBL and managed by a commercial entity such as EMBLEM. Seed financing of this facility (for preparation of the plans, permits, construction site preparation) could come from technology transfer income (proceeds from EMBL-owned shares), while the main financing could come from a loan secured by additional EMBL-owned shares, and repaid from rental income (much of it precommitted). Seed costs would be approximately 1.7 MDM. Phase I construction (6,000m² and underground garage) would cost approximately 12 MDM. The building would remain an asset of EMBL once the loan is repaid.

Pending further detailed consideration with EMBLEM, the volume of the Investment fund is currently estimated at more than 10 MEURO. The bulk of the money will be sought from external sources such as banks, venture capital or private investors. Assuming favourable conditions are offered, investment originating in multiple member states would be optimal. EMBL/EMBLEM will probably need to be lead investor(s), providing some 20% of the assets (from technology transfer activities) so as to retain a primary decision-making role. The external investors will of course share in the ownership of the fund and presumably will demand some control over its use. Therefore, the Fund will need to be an independent legal entity, separate from EMBLEM. The optimal legal structure of the Fund and its size remain to be determined, also taking into account the tax implications.

The prospect that EMBL (directly or through EMBLEM) would need in the near future to make these investments in essential technology transfer tools, led us to consider whether a fraction of the LION shares owned by EMBL might be used for this purpose. The matter grew urgent in late spring, as it became clear that LION intended to go public and make an Initial Public Offering (IPO) in the summer. Normally, sales of shares shortly before an IPO are unwelcome by the company, as they may be misinterpreted as indicating lack of confidence by the existing owners. Furthermore, the terms of the LION offering prohibit sales by the present owners (including EMBL) in the 12 months following the IPO. Therefore, there was a difficult and narrow window of opportunity, which the Head of Human Resources working together with the Director-General has exploited. They were able to convince the management of LION to authorize and conduct an exceptional immediate sale of part of EMBL's shares in LION for the purpose of our investing in future technology transfer activities. This timely transaction created an interim fund of 3 MDM (5-fold higher than the initial valuation of the total EMBL technology that was transferred for setting up LION). The proceeds are committed as seed funding for the two technology transfer-related projects that were explained above.

The rapid development of Technology Transfer at EMBL is expected to accelerate further, as EMBLEM and the proposed Incubator and Investment fund come fully on stream. Before long it will be appropriate for Council, EMBL and EMBLEM to agree on broad guidelines for the use of future proceeds. I propose to turn to this matter early next year, by asking EMBLEM to develop some scenarios involving financial targets and associated options, for consideration together with EMBL and Council. My own qualitative orientation would be first, to invest proceeds back in the technology transfer process so as to capture the full potential of EMBLscience, as it is renewed through turnover; second, to build up a robust endowment for EMBL; third, to keep reinvesting part of the proceeds from the endowment so that it retains and gradually increases its value; and fourth, to generate disposable income on a sustainable basis. Such income should be kept separate from the member state contributions and should be used exclusively to stimulate scientific innovation in the Laboratory.

—Fotis C. Kafatos

Integrating the cultures of basic research and technology transfer

An interview with Fotis C. Kafatos

THREE YEARS AGO EMBL CREATED A TECHNOLOGYTRANSFEROFFICEANDDID A NUMBER OF THINGS TO HELP SCIENTISTS MOVE THEIR IDEAS INTO THE MARKETPLACE. HAVE THE RESULTS LIVED UP TO ORIGINAL HOPES OR EXPECTATIONS?

The results have been impressive. The effort to promote technology transfer has met a responsive chord; it has engaged the initiative and creativity of a number of people in the Laboratory. LION Bioscience is a good example of efforts already made in this area – it was formed based on technology developed at EMBL, and has become a great success.

I want to emphasize that we are very committed to preserving the academic culture at EMBL and the special nature of it. We need to be vigilant to ensure that the move to technology transfer does not have a negative impact on the trust and communication within our community, even though some adjustments will be needed for the two different cultures to coexist and interact. One way of looking at it is that the life sciences and biology have become too important for society to be merely performed in isolation in academic communities. Increasingly, support for the life sciences and the opportunities for jobs for everyone, from scientists to support personnel and technicians, will depend on the use of discoveries in biology for the benefit of society.

The whole concept of technology transfer at the EMBL is a recognition of the obligation of the scientific community to give back to society the fruits of our research for the improvement of the quality of life. In the developed world, these benefits are largely mediated through companies. It is not just doing technology transfer because it is the politically “in” thing to do. It is an opportunity to promote our science, and an obligation to society.

IN PHILIPPE BUSQUIN’S “WHITE PAPER” ON A RESEARCH AREA IN EUROPE, HE POINTS OUT THERE IS A GREAT VARIETY IN INVESTMENT IN AREAS LIKE BIOTECHNOLOGY ACROSS EUROPE. SOME COUNTRIES SUPPORT IT MUCH LESS ACTIVELY THAN OTHERS. IN THE UNITED STATES THERE IS A MUCH STRONGER PUSH FOR THIS. IF EUROPE DECIDES TO PUSH THE DEVEL-

OPMENT OF BIOTECHNOLOGY STRONGLY, WILL IT HAVE A REVERSE EFFECT AND FEED BACK INTO BASIC RESEARCH AS WELL?

Absolutely. I think this has been the motor leading to the increased support for biology in the United States. Doing science has a cultural value; it is an important part of our civilization. But, the realization that valuable applications in the short or longer term will come out of biology is the main basis on which policy-makers decide what level of support to give biology. For example, applications in medicine, whether they go through biotechnology or the pharmaceutical industry, are a very important part of the picture. Another aspect which I would like to emphasize is that there is a certain orthodoxy in Europe which says that we are doing fine in basic science, we do not need more research, all we need to do is capture the knowledge that is already available in order to develop companies. This essentially says that we should be funding applied research and not basic research. EMBL’s proactive stance vis-a-vis technology transfer has a very clear vision towards this problem: we must demonstrate that this orthodoxy, as I call it, is incorrect, that we do in fact need stronger support of basic science in order to have a system that can continue to generate incredible new ideas – ideas that are novel, that generate their own dynamics in terms of academic research, and that create spin-offs in terms of applications for society. It is not just because scientists always want more money. We are facing a crisis and we need to readjust the investment strategy of European science policy. I am convinced that if we do not increase investment in basic research, in a very short time we will see the best science moving out of Europe and Europe becoming second-rate in terms of biology.

EMBLEM HAS RECENTLY BEEN ESTABLISHED AS EMBL’S TECHNOLOGYTRANSFER COMPANY. HOW WILL THE EXISTENCE OF EMBLEM CHANGE THE WAY THAT THE TECHNOLOGY TRANSFER OFFICE WORKS?

The initial technology transfer office has been an investment that EMBL made to promote technology transfer rapidly, which is now really too little an invest-

ment for the task. We are amazed at how rapidly it is being inundated by the enthusiastic emergence of opportunities. Fortunately we had planned for this and have taken steps to establish EMBLEM – essentially the commercial arm of EMBL. It is fully owned by EMBL so as not to introduce policies and priorities external to the Laboratory in making decisions about the Laboratory. That is a very strong message to make. EMBLEM serves the interests of the laboratory but it is private because we want to do it professionally. We want to do it at arm’s length because EMBL is tax exempt, but also so that the management of the Laboratory does not get overly sidetracked by technology transfer, and can focus more on the scientific management of the Laboratory, on the life of EMBL itself. EMBLEM cannot but help the Laboratory in every respect because it will be doing a professional job of promoting the use of our technology in the most advantageous and appropriate manner. This will be done while preserving certain basic policies. These include, first of all, continuing to provide broad access – the fruits of research from EMBL should remain available to the academic research community. Secondly, to the extent possible – we are not protectionists – to favour commercialization which has a significant European component. This is in order to return the benefits as much as possible to the societies that support us, in terms of economic benefits and jobs, to the extent that it makes sense commercially to do so. The third principle is that we have to deal with companies or entrepreneurs who can best commercialize the technology, while giving EMBL and its scientists a fair return. I would say that in a sense you can think of EMBLEM as a much larger and more professional technology transfer office, because it is a company and will have staff dedicated to that effort.

WHAT IS BEING ASKED OF COUNCIL VIS-A-VIS TECHNOLOGYTRANSFER IN THE NEXT INDICATIVE SCHEME?

This issue of the newsletter includes an updated version of the report that I made to Council, which I think summarizes the answer to your question. This report was

enthusiastically accepted by Council, who have urged me to follow its suggestions rapidly, permitting them to make formal decisions in support of the path that we have charted. These proposals were formulated by the leadership of the laboratory, in conjunction with the EMBLEM supervisory board, which includes outside experts, including prominent people from the outside of technology transfer, from the UK and Israel, who are very well informed and experienced. We are asking two things. One is to create a technology transfer center which will serve as the incubator for spin-off companies; it will have the benefit of making it easier for companies to start in the vicinity of EMBL, in a manner that will not disrupt our work here. There will be a separate building that will minimize disruption and at the same time will be close enough to foster interaction. Most importantly it will increase the visibility of EMBL as a center which is really valuable to Europe, and I say Europe, because it does not just address the local

region. Part of the activities of the technology transfer center would support companies that would end up moving elsewhere and part, where capacity permits, the formation of companies that from the start will be established elsewhere in Europe and are only marginally involved with EMBL: a member state company may need advice on patenting, or help with starting companies, such as finding funding, etc. which may be provided by the services housed in the incubator. To the EMBL community there may be the advantage of dual use facilities which we would otherwise not have, perhaps larger conference facilities than we can accommodate here, for example. The new building will also have all the facilities that the start-up companies would need, so they will not depend on EMBL. We are looking at it as stand-alone center for commercial development which is more than symbolically across the street from EMBL. It is not the EMBL. But it will have beneficial input for the Laboratory, and vice-versa.

HOW WILL THE BUILDING BE FINANCED?

In general, the plans have been very carefully thought out so as to minimize disruption to the laboratory. To address immediate needs for more incubator space, port-a-cabins will be put in place in the early part of 2001. All the construction will be done so that parking will actually increase at every stage rather than decrease! As far as financing is concerned, the answer is very clear. It will not be financed by EMBL, but externally. We have obtained endorsement from Council that the use of the income from technology transfer – a minor portion of LION shares that we sold before the initial public offering – will be used to start this process. This is a completely separate account from the research budget of the Laboratory. It is essentially using some of the fruits of technology transfer to invest more into technology transfer. Beyond that we are looking at commercial loans which will be paid back over time through rent. We already have a great

Angus Lamond takes the reins of EMBL's new Alumni Association

For over twenty-five years, EMBL has steadily produced alumni who have consistently gone on to do interesting and important things in European science. The member states regard this resource as one of the main ways that the Laboratory adds value to European science. During the twenty-fifth anniversary year, 1999, a major effort was made to contact former staff in hopes of creating a solid network of alumni. At the Laboratory's anniversary meeting last October, returning alumni decided that it would be worthwhile to establish a formal association and to found it as a legal entity under German law. The idea was greeted with great enthusiasm by the Director General and the current staff, and the association now has attained legal status, thanks particularly to the efforts of Peter Wenzel-Constabel, Head of Human Resources. Angus Lamond, former group leader in the Gene Expression Programme, has been elected as the association's acting president.

Angus, who is now a Wellcome Trust Principal Fellow and Professor of Biochemistry at the University of Dundee, Scotland, is enthusiastic about the association's potential. "I think that most people who have been at the EMBL have gotten a great deal out of the experience – I know that I certainly have. The Alumni Association now represents

an opportunity for us to maintain our contacts with EMBL and to give something back to the institute," he says.

Angus says he is honored to have been chosen as the acting president. "I have a strong wish to help and support EMBL, because it is a unique place and really plays a major role in supporting molecular biology throughout Europe. Of course, the president of the Alumni



Angus Lamond

Association should be chosen democratically and that wasn't entirely true in my case. Once the association is running and we have more contact with the alumni, I feel it is more important that a true election can be held so that more people can participate and get involved with the Association."

He has several ideas about what the association might do. For example, the alumni might sponsor an annual lecture or scientific meeting, or even fund a PhD student. Additionally, a network of alumni could be extremely useful in promoting the Laboratory and basic research in the member states. They could also play a useful advisory role in helping the laboratory to make decisions and decide upon its future scientific programmes.

But the first task will be to step up the search for alumni who have kept their current addresses up-to-date with Personnel. Alumni are strongly encouraged to get in touch and forward changes in their addresses in the future. More than 900 of EMBL's 1500 scientific alumni have been tracked down, but the rest need to be found. And the association hopes to include EMBL's former non-scientific staff, who have proven more difficult to find. The EMBL homepage www.embl-heidelberg.de provides a link telling alumni how to register; people can also send their current addresses by mail, care of the Alumni Association at the Laboratory in Heidelberg. There is currently no membership fee, and all registered alumni will receive the EMBL&cetera newsletter for free, on a regular basis.

–Russ Hodge

demand for the space, so there is no possibility that the building will end up on the EMBL budget. It will not. Quite the opposite – it will allow us to add value to what we do in terms of commercial activities, whose expansion will ultimately support science at EMBL. We are also asking Council to allow us to form an investment fund. This would make it possible for people who are contemplating starting a company to do so more easily without having to go through the sweat and pain of seeking expensive seed funding or advice on how to do it, and so on. This way, a fund in which EMBL and EMBLEM would be partners can provide valuable early help to EMBL-connected companies. Of course this should not be seen as an “open sesame” to bring in more money to any idea that we have. The idea has to be commercially viable, and it will be judged by the external professional management. Therefore the investment fund will be driven by the private sector. We are asking for investors to join this fund; it will not be a simple

loan from the bank. These two components are uniformly seen as the appropriate tools for a laboratory like EMBL. For example, at the Pasteur Institute they are doing exactly the same thing, though they are slightly ahead of us. We are very lucky to have on the board of EMBLEM very experienced people in both of these components—the investment fund and the incubation space.

WHAT FINANCIAL CONTRIBUTION CAN THIS BE EXPECTED TO MAKE TO THE LABORATORY IN THE LONG RUN?

This was made very clear in my report and the comments agreeing with it. We see the benefits of technology transfer not as a substitute for their own support, not essentially as the easy way out of meeting the Member States’ obligation to support the EMBL, but as a way to further enhance the work at the laboratory. The income from technology transfer should be used first of all to promote technology

transfer to make it sustainable, as, for example, we will do with the construction of the incubator space. Secondly, it has to be directed toward an endowment fund. Endowment funds are not as widespread in Europe as they are in the US, but anyone who has experience with the American academic system knows how incredibly valuable an endowment fund is. It gives you a source of income which is separate and complementary to your other sources of income. In the case of the EMBL, the vision here is very clear. The proceeds from the endowment fund should be reserved as an innovation budget for the science of EMBL. It will allow us to move rapidly into new areas, to do things with greater ambition in a very timely manner, and to make the EMBL flourish even more as a basic research organization.

–interview by Russ Hodge

EMBL staff and alumni help launch a new organization

Students and staff members from the EMBL left town in great flocks to take part in the first meeting of the European Life Scientists Organization (ELSO), held from Sept. 2-6 in Geneva. ELSO is the brainchild of Kai Simons, Director of the new Max Planck Institute for Cell Biology and Genetics in Dresden, and others including EMBL alumnus Thomas Kreis, who died in 1998.

"We hope that ELSO will become a general forum for catching the excitement in the molecular life sciences and help to raise the standards of biomedical research all over Europe," Simons says.

ELSO plans future meetings – a second conference will be held in Nice from June 29 to July 3, 2002 – and hopes to provide a forum that can lobby national governments and the European Parliament in support of the life sciences. While other interest groups have been successful at marshalling their forces and effecting changes in policy, scientists have been slow to become active in the international political sphere. The organization hopes to change this by following the model of some American counterparts, such as the American Society for Cell Biology, on a Europe-wide basis.

"The success of ELSO 2000 can really be attributed to the network of EMBL alumni all over Europe (and around the world)," Simons says. "It is fantastic that there are so many of us and that we form a network not only of colleagues with similar interests, but of friends."

The organization has created the ELSO Gazette, a new publication that appears uniquely in electronic form via the World Wide Web. The Gazette is an experiment which hopes to capitalize on the immediacy offered by internet publication. It is



Kai Simons

offering free advertisement for jobs in the molecular life sciences – within a short time, a considerable number have already been posted on the site – and aims to provide a comprehensive list of meetings. "If all scientists actively participate and post things, the Gazette will be a success," Simons says.

ELSO's homepage can be found at www.elseo.org. Links from that site lead to the Gazette, which is available for free upon registration.

ELSO is one of the major topics of an in-depth interview with Simons which will appear in the November issue of the EMBO Reports (see related article, page 9).

–Russ Hodge

An announcement Wellcome to the EBI

In July this year, the Wellcome Trust announced it will invest 8.8 million pounds (equivalent to 14.6 million Euros) over the next five years in the Ensembl project, which has been developed at the Sanger Centre and the EBI.

On June 26th, major sequencing centers announced the completion of the "draft" (approximately 98%) of the human genome, and now scientists are faced with the major task of analyzing its biological meaning. This requires sophisticated computer programs which collect, assemble and interpret sequence data. Ensembl is a software system and a database which contains all of the genomic DNA sequence currently available and integrates data from several existing databases. In this way, the system can

automatically track refined or corrected sequence data. In addition, sequence pieces are mapped to chromosome regions and assembled, and the sequence is analysed. Ensembl predicts genes from the genome sequence and links information scattered through the literature about any known biological functions attributed to genes. Other interesting features of DNA, such as SNPs (single nucleotide polymorphisms) or repeats are also available from the Ensembl database.

The Ensembl project is based on an entirely "open" philosophy: all data and program source code are available for free and unrestricted use on the part of both academic and commercial biomedical researchers world-wide. A large

number of researchers are already using the Ensembl site and data resources. Software developers from academia and major pharmaceutical companies have also begun participating in a totally open software collaboration with the Ensembl team to speed the development of the software.

Financial support to the Ensembl project will benefit the entire scientific community. "This grant will enable Ensembl to expand its team and give the project sufficient computer resources to process the avalanche of sequence data that is being generated," says Ewan Birney, who heads the Ensembl initiative from the EMBL-EBI side.

–Katrin Weigmann

Speeding up protein purification and expression



Matti Saraste and Arie Geerlof

For many types of biological research, it is necessary to obtain large, quantities of pure proteins, and a variety of organisms are used as biological "factories" to produce them. *E. coli* has largely been the organism of choice to accomplish this. But today, biologists often want to express large proteins, complex molecules or several proteins at a time, which may be difficult in bacteria. More and more, researchers have turned to other systems, such as yeast or insect cells.

Until recently at EMBL, expertise in expressing and purifying proteins could be found scattered throughout the laboratory; individuals who needed the techniques had to spend weeks or months learning to work with each new system. The Laboratory has created a new Protein Expression and Purification Unit to offer training and support. The staff hopes to offer short practical courses on different techniques, as well as providing essential information through their website at the address below. They have already established extensive collections of expression vectors and bacterial and insect host cells and produced a number of proteins which

can be useful in protein production. Furthermore, the Unit is open for any form of collaboration in the production of specific proteins. The team can be reached in person in room 434.

"Proteomics is moving along, and there is a need for high throughput," says Arie Geerlof, who runs the new unit. "Having resource people to teach scientists will speed things up a lot." Geerlof is assisted by Ario de Marco, and has also received help from David Drexel, who is in charge of setting up a similar facility in the new Max-Planck Institute for Cell Biology in Dresden. Anna Westlund, Swedish biotech engineer and specialist in large-scale animal cell cultures, will soon arrive to round out the unit.

Geerlof comes to the EMBL after doing his own research as a post-doc at INSERM in Montpellier and later at the University of Leicester in the UK. He faced the usual problems encountered by researchers when they try to express proteins in a new vector.

"People think that eukaryotic cells are hard to manage – that may be true especially with mammalian cells, because of more complex culture conditions and sterility issues, but insect cells are actually relatively easy to deal with," Geerlof says. "This gives people alternatives when they run into problems with *E. coli*. You don't have to stick to the old method of trying over and over again, a dozen times, in bacteria; you can try insect systems in parallel."

The unit grew out of a proposal from Matti Saraste, Coordinator of the Structural and Computational Biology Programme, who says that the time needed for individual researchers to learn new expression systems was unnecessarily slowing down work and keeping predoctoral students, for example, from getting started on their projects. One of the first steps in getting things going was to collect expression vectors and create a database where expertise and experiences could be exchanged over the Web.

http://www/ExternalInfo/geerlof/draft_frames/

–Russ Hodge

In 1982 EMBO launched the EMBO Journal. Its aim was to attract high quality publications and to strengthen the European Molecular Biology Community's sense of ownership of their science. Under the guidance of John Tooze and later Iain Mattaj, the EMBO Journal has been an outstanding success by all criteria. Its success has indeed prompted EMBO members to ask, why not bring forward more journals from EMBO? After exploring different options, from specialist journals to splitting EMBO Journal into separate sections dealing with different levels of cellular organization, we opted for a journal that focuses on aspects not covered by the EMBO Journal, thereby providing a useful addition to the journals available to scientists.

EMBO Reports is divided into three sections: Scientific Reports, Science and Society, and Reviews (see below for a

description of each section). It is published monthly and the first edition appeared in July 2000. Copies should be available in your library if not on your shelf – as the first three issues are being delivered free to you with the EMBO Journal. Take a look at it. I think you will find it the sort of journal that is worthy of a personal subscription and certainly of an institutional one. It is designed to be easily read and its mixture of contents is something that we hope you will find attractive.

The launching of any new journal is a time of considerable stress. The dedicated input from Holger Breithaupt, Chris Blaumueller and Marlies Otter-Nilsson, the three section editors, has been essential to getting it on the shelves. The creative and technical flare of Volker Wiersdorff with input from Russ Hodge is very evident on each page and togeth-



er the whole team which are currently housed in the prefabricated hut in the car park deserve tremendous credit. Our joint task now is to ensure that it continues as a high-quality, interesting journal. You can help by submitting material to the journal and of course, by ensuring that it is a success at the box office as well as in the critics' reviews!

–Frank Gannon

Asserting a new style – from the editors of the EMBO Reports

Scientific reports in EMBO Reports present high-quality, novel data in a concise manner. Our format is intended to encourage submission from authors who have brief but complete stories to tell, and whose conclusions are likely to become the starting-point for more extensive series of studies. In terms of scope, we hope to attract papers from a wide range of areas within molecular biology. We particularly wish to encourage plant biologists and researchers from the bio-medical sciences to submit their work. We are also interested in manuscripts on "data-mining", i.e. papers that describe pre-existing data that have been analyzed in a unique way.

A special feature that we would like to introduce into our Scientific Reports is a Speculation subsection that would appear at the end of the Discussion. This subsection gives authors the opportunity to elaborate on their ideas, working models or hypotheses without relating them directly to the existing literature, as is required throughout the rest of the Discussion section.

Science & Society. This is an exciting time for scientists. Never before in history have science and technology had such an influence on the world that we are living in. The biological sciences in particular are having a strong impact on society as they change and improve medicine, agriculture, and last but not least, our view of the living world itself. But as with all new technologies, there are fears about and resistance against their use, which makes it necessary for scientists to talk to the public and to hear their objections.

The Science & Society section provides a platform for such a dialogue. It features analysis and viewpoint articles from scientists and professional journalists about the impact of molecular biology on society, politics and business and vice versa. From time to time, the section will print interviews with



Holger Breithaupt, Chris Blaumueller and Marlies Otter-Nilsson
photo: Doug Young, EMBL

movers and shakers in the scientific world as it is more interesting and entertaining to hear the news from the horse's mouth. To ensure an ongoing dialogue, EMBO Reports prints letters to the editors that comment on or contribute to articles previously published. Finally, the section will review those books that make a contribution to this important dialogue between science and the public.

The aim of the **Reviews section** is to bring together the latest information on a variety of timely topics, in the form of concise reports that are interesting to, and easily understood by, the molecular biology community at large.

Articles in this section fall into three broad categories: meeting reports, literature reports, and reviews. Meeting reports in EMBO Reports cover a wide range of workshops and conferences held throughout the world, and attempt to identify emerging trends within the scientific area covered by the meeting. Rather than detailing all of the issues that are brought up by the speakers at the meeting, these reports will be lively expositions that distill the discussion at the meeting down to the essential findings that

are shaping the future course of that field. Literature reports are similar to the News and Views features of other journals, in that these brief articles serve to highlight significant publications in a variety of journals, pointing out their contribution to the field. We are particularly interested in covering articles whose full impact on molecular biology may not have been immediately appreciated by the entire community, for example, because of their appearance in specialist journals. Reviews in EMBO Reports are relatively brief, and cover important developments in an accessible manner. A special category of these reports that we have introduced is the "Concept", a type of review that allows more than the usual speculation, based on thoughtful analysis of the current literature. An article on the early stages of evolution in the August issue is the first example of this type of report. It is our hope that these articles, in particular, will spark the kinds of interdisciplinary discussions that often lead to the most unexpected discoveries.

It is our intention to provide stimulating reading for as many members of the molecular biology community as possible. With our Science & Society section, we will keep you abreast of the impact that the latest scientific, political, and socio-economic developments have on the life sciences, and vice-versa. Our Reviews section is structured to present you with the latest thoughts of the experts, based on information gathered at meetings and from throughout the literature. And we hope that our Scientific Reports give you the opportunity to read about solid, exciting discoveries that you might not hear about for some time otherwise, simply because they don't add up to a long story. Overall, we hope that you find this journal informative and enjoyable to read.

–the editorial staff of EMBO Reports

from the
sister sciences...



Drawing with a child's eye

In August the staff of the Kindergarten posted an exhibition of EMBL children's artwork in the EMBL canteen. The pictures were accompanied by comments on the development of drawing skills from infancy to school age. This article discusses developmental psychology's approach to the study of drawing.

While Picasso may have drawn like Raphael at a very early age, most people take years to acquire some skill at it, and most of them will never draw like Raphael. Adults show a wide range of aptitude at this skill. But just as organisms go through predictable, highly-structured stages of physical development, children exhibit consistent patterns in the development of drawing. Ferocious scribbling gives way to crude shapes and the first attempts to depict people – dots for eyes, lines for a nose and mouth – often appearing willy-nilly on the page. Soon heads appear atop stick-like bodies. The bottom of the page becomes the ground, sometimes decorated with a saw-toothed line of grass (more often than not continuing off the page onto the tablecloth), and the sky often hangs as a thin blue stripe near the top. People with huge, clumpy feet and dozen-fingered hands float somewhere in between. Eventually, some children will learn to draw what adults think of as realistic, photo-like representations of objects, where tricks of shading and perspective give flat images the illusion of three-dimensionality.

These regular patterns have led some people to think that a biological, perhaps even genetic, "program" lies behind learning the skill. More and more, psychologists hope to draw a parallel between – and perhaps even to link – cognitive and physical development. The analogy is interesting and informative, but it only goes so far. While both fields aspire to learn something about the development of whole organisms, molecular biology has the tools to parse biological processes into their fundamental components, and psychology probably does not.

"When I was a child, I used to draw like Raphael, but it took me a lifetime to learn to draw like a child."

–Pablo Picasso

Most psychologists consider drawing a member of a class of activities including language use, counting and other behavior. While all behavior has a basic genetic component, these skills are acquired in a predictable succession of steps early in life, virtually self-taught, in almost any normal social environment.

One of the most powerful models for understanding children's cognitive development was formulated by the Swiss psychologist Jean Piaget, who described a series of stages that seem to be found in all cultures. It is no accident that aspects of Piaget's theory have a biological flavor, because he was initially trained as a biologist. Regarded as something of a "Wunderkind," he published his first scientific paper at twelve and wrote his doctoral dissertation at the age of 22 on the subject of mollusks. Soon afterwards he became interested in psychology. Given the task of developing standardized tests for children in schools in Paris, he noted that below a certain age, children consistently gave the same kinds of wrong answers to particular questions. Piaget's attempts to



artwork by EMBL kids

understand the logic behind these mistakes would lead him to establish an entirely new school of psychology. Since the appearance of his first important books and papers in the 1940s, the mainstays of his theory have been supported by countless observations and experiments.

Piaget's stages of cognitive development are defined by broad themes, such as the ability recognize particular spatial relationships (the amount of a substance doesn't change when it is poured into a differently shaped container), or the ability to manipulate symbols (in, for example, mathematics or abstract problem-solving tasks). Each theme manifests itself in many different types of behavior. His model is "constructivist" rather than a "genetic" because it proposes that the child builds his own mental structures and behavioral skills through play and active encounters with the physical and social environment. Play brings children into situations where objects no longer behave according to child-like ways of thinking. As a result, the child revises his internal representation of reality, and this gives the development of intelligence a "self-organizing" character.

Drawing is linked to more general themes of cognitive development – the ability to imagine, for example, what an arrangement of three-dimensional shapes might look like from another person's perspective without actually going over there to have a look. This is a key step in learning to see "space" on the two-dimensional page in new ways. The complexity of drawing – which globally integrates perception, motor skills, and cognition – means that it has to be studied in a multi-disciplinary way. There are ongoing projects to create huge collections of children's pictures for analysis

(Zürich) and attempts to create computer drawing programs which can simulate children's artwork.

Such studies may be methodologically rigorous, but are they "scientific"? This question has been debated ever since the birth of modern psychology, because the large-scale, holistic phenomena that social scientists study seem hopelessly complex to biologists, given our present state of knowledge. Although psychologists try to break down behavior and mental structures into minimal, fundamental components that can be manipulated through experiments, the units have to be larger, vaguer, more subjective than those used by "hard" scientists. The results that can be obtained are somewhat like trying to draw evolutionary trees based on the gross morphology of fossil skeletons – attractive hypotheses can be formulated, but drawing real conclusions will probably require an understanding of the fundamental processes that produce changes of form and thought. Whenever behaviorists and others have tried to limit psychology to studies of absolutely quantifiable phenomena, they have had to ignore (or dissatisfyingly redefine) the questions that have historically been of key interest to the field. This is a key component of the communication gap between the social and natural sciences.

–Russ Hodge

Can the gap between genes and thoughts be bridged? Come to the first **EMBL PhD Symposium**, October 20-21, 2000, to hear the answers of world-leading neurobiologists.

www.EMBL-Heidelberg.DE/Conferences/PredocSymposium/

Conference watch

4th EMBL Transcription Meeting, Heidelberg, August 26-30, 2000

Among numerous conferences organised at the EMBL in 2000 was the fourth "Transcription Meeting" in August, co-organized by Henk Stunnenberg (Nijmegen University), Francis Stewart (EMBL), Achim Leutz (MDC, Berlin) and Laszlo Tora (IGBMC, Illkirch). Henk, a former group leader in the Gene Expression Programme, came up with the idea of the Transcription Meeting in 1994. "The general feeling was that Europe needed its own meeting because EU scientists were under-represented at US conferences," he says, "Someone just had to set the train in motion and being at EMBL, I thought it would be a relatively easy job".

While the conference's title refers to the process of transcribing genetic information stored in DNA into an RNA molecule, Henk feels that the conference at this stage would be better labeled as the 'Gene Expression Meeting'. "The meeting title wrongly raises the impression that mechanistic matters only will be covered, as has been the trend at the Cold Spring Harbor meetings in the US. This might have been true for the first few EMBL meetings, but now we are concentrating more on biological issues such as development and differentiation, reflecting research trends in Europe." The organizers did not want a majority of US scien-

tists, and have therefore restricted their representation to roughly 50% of the speakers. The popularity of the EMBL meeting has led the Cold Spring Harbor organizers to widen their focus.

As in the past, this year's meeting was over-subscribed, and only 300 scientists were selected to attend. Young researchers were strongly represented, mainly due to the affordable participation fee combined with its format of posters and short talks. Because of its young and European public, the meeting also benefits from a considerable amount of EU funding. "The EU was eager to support us and were very helpful with the application for funding, giving us tips on how to improve our proposal," says Henk.

When asked about the most striking element in this year's meeting, Henk answers: "Light is shining into the black box of how gene regulation changes or is modified via changes in the chromatin structure. Particular highlights for me were talks by Patrick Cramer (former EMBL researcher), Meinrad Busslinger, Alan Wolffe, Tony Kouzarides, Shirley Tilghman and Renato Paro."

Though Francis Stewart, one of the principal organizers of the conference, will soon be leaving the EMBL, Henk hopes that future editions will continue to be organized at the laboratory. "We hope to rely on EMBL's experienced conference office, as well as the social aspects – the nice meals, beer sessions and parties – that the EMBL is able to offer."

For those who are interested, abstract books of the 2000 meeting are still available from the conference office (conferences@embl-heidelberg.de).

–Lena Reunis

oligo...
going...
gone

EMBL's oligonucleotide synthesis service has closed its doors. The service began in 1986 with Group Leader Brian Sproat, and was then taken over by Ramón Eritja and his group in 1994. For almost 15 years, these groups provided an essential service to EMBL researchers, synthesizing DNA and RNA primers used for PCR and structural analysis. "The fact that this service was done in-house was a tremendous benefit for EMBL researchers," says Marten Wiersma, a technician in Ramón Eritja's group. "For many years, the oligo service was on the leading edge of technology. We were able to provide made-to-order unique products quickly and efficiently, saving EMBL scientists valuable time. People could place orders with us and pick them up the next day instead of spending hours trying to synthesize the oligos on their own."

The decision to close the service was prompted in part by the arrival of specialized biotechnology companies that can now provide the same service at cost-effective prices. While recognizing the importance of the groups' contribution to the research community throughout the years, EMBL management has had to make some hard choices in deciding how to make the most of limited resources. Since most oligos needed at EMBL can be bought at competitive prices from outside sources, it was felt that the service no longer provided a unique service that had to be maintained while renouncing other important needs.

"We would like to thank our users for their support throughout the years, and especially during discussions about the future of the service," says Wiersma.

–Sarah Sherwood

today
@EMBL

To get an overview of what's happening today at any of the five EMBL sites, you can now drop in on the new "Today at EMBL" website. The Office of Information and Public Affairs (OIPA) and Björn Kindler have created what they hope will become a "one-stop" site containing a complete overview of what's going on within the Laboratory. This will include not only official events such as seminars, courses, and workshops – it's also a place to register social events and make important announcements. There are two versions of the page: an extended list containing internal events, visible only from a computer on the EMBL network, and a second page with events of interest to both insiders and the external public. The external page can be reached from the EMBL homepage at www.embl-heidelberg.de and once there, users can go to the internal page.

The site can be extremely valuable if people faithfully post all of the information they are otherwise announcing on bulletin boards. Group leaders, programme secretaries, administrators and the OIPA can make direct entries into this list. Others can have their event or announcement posted by sending an e-mail to today@embl-heidelberg.de.

Peter Wenzel-Constabel sets his sights on Bonn



Peter Wenzel-Constabel and Steve Ferris

At the end of November, Peter Wenzel-Constabel, Head of Human Resources, will be leaving the EMBL. Trained as a lawyer, and the only native German in senior management on the EMBL staff, Wenzel-Constabel has lent the EMBL expertise in research administration during an important phase of the Laboratory's development. Many of the projects for which he has helped to lay the groundwork, including the technology transfer initiative and the alumni association, are now coming to fruition.

Among the contractual milestones that Wenzel-Constabel's achieved during his tenure at EMBL were the creation of Ancillary positions; many of these positions in the past had not always conformed to conditions established by staff regulations. At a time when some member states were under pressure to reduce pay packages for the staff of international organizations due to a worsening EU economy, Wenzel-Constabel helped to preserve the Laboratory's existing policies. "Working with the staff and administration, we produced a clear and convincing case that no changes were necessary," he says.

On the service side, Wenzel-Constabel is happy to report that along with staff members Thomas Graf, Dirk Bohmann and others played an active role in establishing EMBL's new Kinderhaus, which opened in 1999. "The kinderkrippe used to be housed in the cabin originally used by the architect who designed the Laboratory. This was meant to last only two years, but when I arrived it had already been there for 20," he says. "In a difficult financial situation, we managed to find the resources to tear down the old inadequate structure and build the new one."

Before coming to EMBL, Wenzel-Constabel was at the German Ministry for Research and Technology in Bonn working on Intellectual Property. He also spent three years as a Science Councilor at the German Embassy in Washington D.C., where he learned the ins and outs of organizations such as the National Institute of Standards for Technology and MIT that spearheaded the field of technology transfer. "One of the reasons I came to the EMBL was the fact that in the early 1990s, biotechnology was becoming a hot issue, and I was interested in joining in on the activity. EMBL appeared to me to be an ideal setting to develop this kind of initiative in Europe."

Wenzel-Constabel's expertise has, in fact, been crucial to EMBL technology transfer initiative (see feature article, page 2). Together with the Working Group on Technology Transfer, he established internal guidelines to give incentives to investors, and eventually EMBL set up a full-fledged technology transfer office and committee. He also laid the legal groundwork for EMBLEM, EMBL's own technology transfer company.

"When I first arrived, technology transfer at EMBL was being done on the side," he says. "Over the years it has become something of tremendous interest. It is now seen as an opportunity and not something that disturbs science; it is something that creates funds and the possibility to do more scientific work."

When asked what he sees as the biggest change in the Laboratory over the past five years, Wenzel-Constabel was optimistic about the future. "EMBL has gone through a difficult financial phase. Member states have stretched our budget to the limits in favour of a focus on national institutions. My feeling is that this attitude has slowly changed. They are now seeing there is a need to support EMBL, and that limiting funding is no longer an option. The EBI has proven to be very successful and necessary. They have seen the need to support it. The EMBL has a good scientific reputation, and the scientific community of member states is supportive of the EMBL. Member states realize that they cannot overlook the EMBL if they want to support molecular biology in Europe. The EMBL is a vital resource for them."

Wenzel-Constabel will be going back to Bonn where he will continue to work in research administration at the international level.

—Sarah Sherwood

Administrative announcement

While the review of the EMBL Health Insurance Scheme is still ongoing, the company Intermedex will administer the present Health Scheme for another year until the end of 2001. After the – now ongoing – discussions between Management and Staff Association, a proposal for a new/revised scheme is likely to go to Council for approval in Summer 2001. Because the present scheme, which at the time was designed mainly for "German needs", is causing a number of difficulties for our Outstations, one major goal of the revision is to better integrate our Outstations.

Would you like to contribute
to the next issue of **EMBL & cetera**?
Just send a message to info@embl-heidelberg.de.
Deadline for submissions is **November 27, 2000**.

people @EMBL

Philippe Bastiaens is a new Group Leader in the Cell Biology and Biophysics Programme. He received his PhD in 1992 from Wageningen University in the Netherlands, and did postdoctoral work at the Max-Planck-Institute for Biophysical Chemistry in Göttingen before becoming a group leader at the Imperial Cancer Research Fund in the UK. At EMBL he will use microscopic image technology and molecular biology of ErbB signaling systems to better understand the way protein signaling networks operate in a cell.

There's a new face in the mouse house! Following the departure of George Keech, **Mike Winnen** has taken over as the EMBL veterinarian. Mike joins the Laboratory after having spent the past 25 years in veterinary diagnostics and research laboratories in Holland, Bolivia, Botswana, Argentina and Costa Rica. "I was particularly excited to come to the EMBL," says Mike, "not only because of the high-level animal research conducted at the Laboratory, but also because of its youthful and international environment."

awards, honors &cetera

In September, the "European Life Science Organisation" (ELSO) awarded **Elisa Izaurre** the first "Early Career Award" for young senior scientists who have made outstanding contributions to the life sciences. ELSO, a new organization, has the goal to promote scientific collaboration in Europe and the public understanding of science. In addition, it strives to support the personal progress of scientists in Europe based on scientific excellence (see article on ELSO, page 7).

Elisa received the award for her work on mRNA export. She started working on RNA export when she was a postdoc in Ian Mattaj's lab at EMBL in the early 1990's. In 1998, leading a group at the University of Geneva with a focus on mRNA, she identified a factor called TAP which is recruited by a monkey virus to promote mRNA export. Now as a group leader at EMBL, a position she has held since 1999, Elisa and her colleagues are taking a deeper look at TAP. They found that it interacts with mRNAs as well as with components of the nuclear pore complex, making it a good candidate for an export receptor. Since TAP doesn't belong to the widely-known Importin-beta-like family of Ran binding proteins, it represents a completely novel export mechanism. In addition, the group has found a family of four homologs of TAP in humans. "The different homologs are expressed in a tissue-specific manner; one of them, for example, is specific to the brain," Elisa says. "With this information in our hands, we have the tools to learn how mRNA export contributes to gene expression."



&

In July, **Regina Neubecker**, a Diploma student in Ernst Stelzer's group, received the "Otto-Haxel-Preis für eine herausragende Diplomarbeit" from the Department of Physics and Astronomy of Ruprecht-Karls-Universität, Heidelberg. The title of her thesis was "Die optische Levitation dielektrischer Glaskügelchen in Luft: Theorie und Experiment." Neubecker performed the first experiments in the lab to capture and levitate glass beads.

Who's new?

In Additional Research Activities: Stephanie Blandin (Kafatos), Diane Clark (Gannon), Michael Hübner (Gannon), Elena Kokoza (Kafatos), Dominique Manu (Gannon), Jennifer Volz (Kafatos), Rui Wang, (Kafatos). In the Biochemical Instrumentation Programme: Federico De Masi (Ansoerge), Marc Gentzel (Wilm), Zbynek Kozmik (Ansoerge). In the Cell Biology and Cell Biophysics Programme: Philippe Bastiaens (Bastiaens), Gertrude Bunt (Batiaens), Mirco Castoldi (Vernos), Monica Fanarraga (Vernos), Rebecca Forster (Pepperkok), Beatriz Gil (Dotti), Nina Helppi (Simons), Anna Holmström (Way), Jan Huisken (Stelzer), Patricia Kelly (Karsenti), Péter Lénart (Ellenberg), Gwenael Rabut, (Way), Christoph Reese (Griffiths), Anthony Squire (Bastiaens), Christian Tischer (Karsenti), Peter Verveer (Bastiaens), Fred Wouters (Bastiaens), Timo Zimmermann (Pepperkok). In the Developmental Biology Programme: Katrin Anlag (Treier), Emanuel Busch (Bouwmeester), Annamaria Caella (Minichiello), Filippo Del Bene (Wittbrodt), Luca Dolce (Klein), Lars Gredsted (Treier), Gustavo Gutierrez (Nebreda), Olivier Hachet (Ephrussi), Oliver Hantschel (Superti-Furga), Wendy Lockwood Banks (Cohen), Anne Paquelet (Rørth), Eusebio Perdiguero (Nebreda), Niki Scaplehorn (Bouwmeester), Ritsuko Suyama (Ephrussi), Beate Wittbrodt (Wittbrodt). In the Gene Expression Programme: David Gatfield (Izaurre), Virginie Hamel (Mattaj), Péter Lénart (Ellenberg). In the Structural and Computational Biology Programme: Brigitte Altenberg-Greulich (Gibson), Christian Biertümpfel (Suck), Sigrun Brendel (Hoenger), Aidan Budd (Gibson), Igor D'Angelo (Saraste), Ario de Marco (Saraste), Judith Ebert (Conti), Christian Edlich (Sattler), Sebastien Fribourg (Conti), Raik Grünberg (Nilges), Janneke Hendriks (Sinning), Angelika Krebs (Hoenger), Ivica Letunic (Bork), Rune Linding (Gibson), Joaquim Mendes (Serrano), Ana Messias (Sattler), Konstantinos Michalodimitrakis (Serrano), Jens Erik Nielsen (Serrano), Genaro Pimienta-Rosales (Conti), Claude Sauter (Suck), Stéphane Thore (Suck), David Torrents-Arenales (Bork), Thomas Wendt (Hoenger). Elsewhere at EMBL, Heidelberg: Mary D'Lazarus (EMBO), Andrea Gerling (Vintersten), Margaret Hamill (Library), Stefanie Hammer (Kindergarten), Annika Kristenson (Finance), Csilla Nelder-Szemeky (Finance), Ralf Offermanns (Administration), Raffaele Totaro (Administration) At the Hamburg Outstation: Carmen Butan (Tucker and Koch), Oliver Schilling (Meyer-Klaucke). At the EBI, Hinxton: Laurence Ettwiller (Birney), Katja Kivinen (Barton), Victor Kunin (Ouzounis).

EMBL &cetera is published by the Office of Information and Public Affairs, EMBL, Meyerhofstrasse 1, D-69117 Heidelberg

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Editor: Russ Hodge; Associate Editor: Sarah Sherwood; Design: Sarah Sherwood, Russ Hodge

Contributors: Katrin Weigmann, Fotis Kafatos, Steve Ferris, Lena Reunis, Ernst Stelzer,

Photographic support: EMBL Photolab
Printed on recycled paper by ColorDruck, Leimen

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