

Editorial

■ Europe began to unite as an economy in 1951 – long before most of us were born – with the integration of the coal and steel industries of six nations into a single community. Yet despite the subsequent common market, relaxed border controls and even a common currency, the evolution of a united Europe, whatever its political framework, is a slow business. Last year's failure of several countries to accept the proposed European Union (EU) Constitution demonstrates the reticence of many of Europe's citizens to commit themselves to the idea of Europe, and their fear of losing their national autonomy, culture, heritage and language.

Science, like trade, is a common denominator of the diverse nations of Europe. In 2000, at the start of a new millennium and half a century since Europe's first shaky steps towards union, the heads of its member states endorsed the concept of making the EU into a world-leading 'knowledge economy', placing science (in its broadest sense), research and technology in the driving seat of the future European economy. This makes sense economically and politically, but it also makes sense because science is an international venture that does not need or heed national boundaries.

■ Meeting

If anything can unite Europe and its citizens, science and learning can. It is already happening, to some extent, through European Framework Programme funding of multinational research networks, international postdoctoral funding schemes like Marie Curie and EMBO, the exchange of students in higher education through the Erasmus scheme and recent efforts to harmonise degree structures and credits. But sooner or later it would occur naturally anyway.

ELSO was established in 1999, born out of a turn-of-the-millennium desire to create a united spirit in the European life sciences. A small group of eminent scientists, lamenting the lack of a large international meeting for the life sciences in Europe, decided to create an organization that would stage such an event. In the USA, the American Society for Cell Biology (ASCB)'s annual meeting, for example, provides a vital venue for thousands of scientists, whether 'up-and-coming' or already established, to

network, exchange ideas and set up collaborations. Not only the ASCB's meetings but also its lobbying for political and financial support for US cell biology inspired ELSO's founders. How much richer we would be with such an organization to give a sense of unity to Europe's life



ELSO's President
Kai Simons

scientists and to give them a voice that could be raised about matters concerning their work!

Following the example of its ASCB role model, ELSO has largely achieved the practical goals it set itself five years ago: it has hosted five international meetings of high repute and it has lobbied EU institutions for improvements to its research-funding mechanisms. The meetings, held in Geneva, Nice and Dresden, each attracted up to 2,000 participants, among them a large proportion of graduate students and postdocs who create lively poster sessions, with scientists of high international standing speaking in the plenary sessions. The meetings have a growing reputation also among scientific suppliers, with 80 booths in the Exhibitors' Hall at the last meeting.

■ Lobbying

ELSO has influenced EU science policy debates at several levels: by lobbying members of the European Parliament directly for funding for independent young investigators in the Marie Curie actions in Framework Programme 6; by running an online petition calling for the creation of a European Research Council (ERC; see the article in this issue) and a reduction of bureaucracy in the Framework Programmes, and delivering the results of that petition to policy makers; through participation of the ELSO Career Development Committee (see the article in this issue) in conferences on mobility and careers, and by participating in the European Life Science Forum's and the Initiative for Science in Europe's activities towards creating the ERC.

Yet European researchers are slow to respond to ELSO's rallying call. Despite their excellent track record, the ELSO meetings attract the same 'core' of about 5,000 frequent participants, even though there must be around 100,000 molecular life scientists working in Europe. It is amazing that, even though the majority of European research institutions lack international-level seminar programmes, more people do not profit from this unique opportunity to get a broad overview of the latest developments in the field. The ELSO meetings fulfill an important need but many European life scientists apparently do not recognise this need! Also, the vast majority of European researchers seem unaware of science policy issues and unwilling to invest any of their time in thinking or discussing or acting to improve existing problems in European science. Why?

■ Motivating

A shortage of travel funds may be an important and valid reason why more people do not come to the ELSO meetings. If student and postdoc funding allows for travel to only one meeting per year – or fewer – young researchers will probably choose to go to a 'specialist' meeting covering specifically their topic of research. But this does not explain the general inertia of European life scientists to participate in the European community of researchers. Like the wider community of EU citizens, maybe national identity, heritage, culture and language still have the upper hand for European researchers. Why get ►

Have an idea for an article?

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► involved in European issues when the circles of influence that most affect your research funding or your future career moves are in your own back yard? The argument that no one European nation can successfully compete with the USA or, lately, with China or India for trade, however, also applies to science. In the future, more and more successful European science will depend on funding and infrastructures that straddle national boundaries, not to mention the talented individuals in those member states that currently can't sustain a solid research base. For the good of us all, we need to become more European in our outlook.

■ Communicating

The new *Lab Times* has been created in such a extrovert European spirit. Its goals, like ELSO's, are to bring Europe's scientific news, faces, events and policy issues to the community of European life scientists, while providing a service for advertisers of European jobs and scientific supplies. It is based on its very successful German-language fore-runner *Laborjournal*, reputed for its investigative journalism, its lively style and – love them or dread them – its citation rankings of individuals and departments. The philosophy of *Laborjournal* resonates with that of ELSO's online magazine, *The ELSO Gazette*, which helped to sustain ELSO's activities in its early years. It makes sense for ELSO now to enter into partnership with the publisher of *Lab Times* and *Laborjournal*: this new ELSO newsletter will be distributed with *Lab Times*, so reaching an audience of 20–50,000 life scientists while *Lab Times* benefits from ELSO's European knowledge and contacts. The two organizations will, however, remain financially and editorially completely independent.

ELSO welcomes this opportunity to reach researchers who are not yet in our core supporter group, and we are positive that this will attract more participants to the ELSO meetings, making them financially self-supporting in the coming few years. Money is a constant issue for a grass-roots organization of impecunious researchers, so ELSO is trying to balance the books by fighting the meeting costs, thereby allowing us to keep the registration fees down, especially for young people. We want this new generation of researchers to come to the ELSO meetings and learn the benefits of being European. The new newsletter should also help ELSO make more researchers aware of the many important issues on the European landscape. We will continue to lobby, both alone and in partnership with the European Life Science Forum (ELSF) and the Initiative for Science in Europe (ISE), to improve the environment for research in Europe. The implementation of the new ERC needs constant vigilance to ensure it becomes the independent and transparent agency scientists have argued for. Another target in ELSO's sights is that of the lack of a sensible career structure in Europe that encourages talented researchers to come here (see the article in this issue).

If you are already one of ELSO's supporters, we hope you will find this newsletter keeps you informed about what the organization is doing between meetings. Please let us know if you have any comment on its format or content. If you are hearing about ELSO for the first time, please consider becoming a member and coming to our next meeting in September 2007 in Dresden.

ELSO: www.else.org

European Life Sciences Forum: www.elsf.org

Initiative for Science in Europe: www.initiative-science-europe.org

ELSO's Career Development Committee

■ ELSO's Career Development Committee (CDC) is a group of around a dozen ELSO members on all rungs of the scientific career ladder. It is working to improve career opportunities for life scientists in Europe both through activities at the annual ELSO congress and through various projects running throughout the year.

At the ELSO meeting, the CDC organizes the ELSO Early Career Award, which recognises the outstanding achievements of a young independent researcher working in Europe. It organizes an 'information and debate' session on a topic of relevance to young researchers' careers (for example, the harmonisation of higher degree structures across Europe, opportunities for new independent junior group leaders, a European tenure-track system, keeping women in science, mobility of researchers, careers outside academia, etc.), and a session on funding resources. At the ELSO meetings, the CDC also hosts a career mentoring lunch, at which expert 'mentors' answer questions and give advice on a variety of career issues.

■ Web resources

In addition to its events at the ELSO meetings, over the past five years since its inception, the CDC has lobbied for the creation of a career development award in Framework Programme 6, which contributed to the introduction of the Marie Curie 'Excellent Teams' award, and it has participated in conferences on European scientific career issues.

The CDC has developed a set of web pages that provide useful resources for young life scientists. These pages give information about international PhD programmes, student and postdoc organizations, mentoring resources, funding resources, job opportunities and women in science, as well as information about the CDC activities at ELSO meetings, the Early Career Award, etc. An important part of the CDC web pages is ELSO's new Database of Expert Women in the Molecular Life Sciences (see the article in this issue).

The CDC is a new and youthful organization that is developing a palette of activities and functions to promote the careers of ELSO members and European researchers in general. Its members are volunteers and it runs on a minimal budget. We therefore welcome all offers of help either with specific tasks or with its general activities.

You can volunteer your help through the web site at

<http://www.else-cdc.org>

Marie Curie Excellent Teams Award:

<http://cordis.europa.eu.int/mariecurie-actions/ext/home.html>



Committee
Development
Career

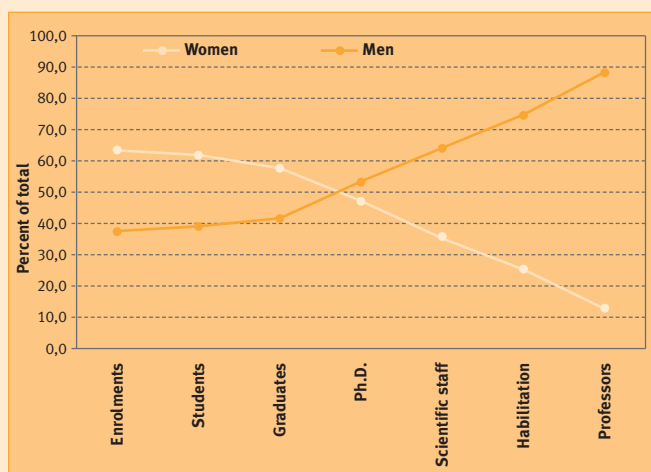
Database of Expert Women

■ To increase the visibility of Europe's women life scientists, from postdocs to senior group leaders, ELSO has just launched a Database of Expert Women in the Molecular Life Sciences. This new resource should help organizations identify appropriately qualified women scientists not only to speak at conferences and in seminar programmes, but also as candidates for professorships and other positions; to participate in advisory groups, on monitoring panels, committees and commissions; to review manuscripts, to write commissioned reviews and to serve on the editorial boards of journals.

The database, which was created by Karla Neugebauer, a group leader at the Dresden Max Planck Institute of Cell Biology and Genetics, on behalf of ELSO's Career Development Committee, already lists more than 300 women experts, each with a page of biographical information about their expertise and achievements. To be accepted into the database, a woman molecular life scientist must either be based in Europe or be a European national based anywhere in the world, and must have published (first or last author) at least one important basic research article in an internationally recognised journal within the past three years. Acceptance is at the discretion of the database manager. Women can apply online, and people can search the database, by going to www.elso-cdc.org and selecting 'Database of Expert Women' in the left-hand navigation bar.

Although women make up around half of students and postdocs in the life sciences, when it comes to the higher positions women are chronically under-represented (see illustration). The same is true at conferences – the number of women speakers rarely matches the 35% target ELSO's Career Development Committee would like to see as the norm.

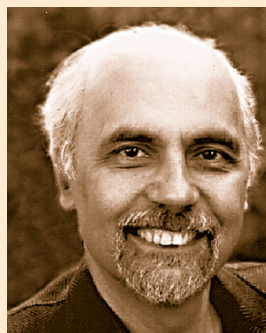
Although several organizations that sponsor European scientific meetings stipulate that gender balance should be considered when assembling the list of speakers, achieving this balance can be a challenge. Zena Werb, past President of the American Society for Cell Biology, which has long been sensitive to the issue, admits that ASCB-sponsored meetings have had difficulty identifying and engaging appropriate women to take



Scissor graph of biologists in Germany. Taken from *Keeping tabs on the women: life scientists in Europe* by Karla Neugebauer in the April issue of *PLoS Biology*

part. "Some senior women have told me they are reluctant to join the database, because they already get a lot of invitations and feel over-burdened," Neugebauer comments. "Paradoxically, senior women may actually receive fewer invitations as a result of this database, whereas junior women will be happy to receive some of the attention they deserve."

ERC Update



**Molecular biologist
Fotis Kafatos is Chair of
the ERC Scientific Council**

■ Most ELSO members will be aware of the movement over the past four years to create a European Research Council (ERC). The idea of an independent basic research agency that would provide a new source of competitive funding, set standards and improve the quality of research across Europe was first mooted in 2002 and quickly gained widespread support thanks, in large part, to the efforts of the life science community*. The European Commission (EC) has proposed to create the ERC within the

next Framework Programme (FP7), which will begin in 2007. A Scientific Council of 22 pre-eminent scientists from all disciplines is already in place. The project is awaiting only the approval of the European Parliament to fire the starting gun.

The ERC will fund research in all disciplines including the humanities and social sciences as well as the natural sciences, and the new Scientific Council reflects this diversity. Its budget is not yet set; it will depend on approval of the overall budget for FP7. But the figure being discussed is around 1 billion euros per annum, rising to 2 billion within a few years – similar to the budgets of the larger European national research councils and enough to make a big difference to European research.

With researchers from 25 member states and all disciplines eligible for funding, the fledgling ERC being inundated with applications. One strategy being promoted by ELSO to manage this 'oversubscription' problem, at least in the build-up phase when the budget is likely to be smaller than in later years, is to limit funding to young investigators setting out on independent careers, who need to be nurtured as future leaders of European science. In its second phase, with an increased budget, the ERC can begin to fund established researchers.

Approval for FP7 by the Parliament in Brussels is expected to come in March, clearing the way for its launch in January 2007 to provide continuity with the current Framework Programme. The Scientific Council and the EC have a huge task ahead of them to put in place a mechanism for the ERC – including a legal structure, application procedures, a peer review system and a delivery mechanism – before the end of this year.

ELSO will be following the development of the ERC and contributing to discussions about this new agency, which has the potential to transform the landscape of European research.

* Simons, K. and Featherstone, C. (2005) The European Research Council on the Brink, *Cell* 123, 747–750

Tenure-track for Europe's Researchers

Looking at academic career progression from PhD student to postdoc and then to a first independent position, almost all countries in Europe have a problem. To a great extent, this is what makes a career in research in the USA so much more attractive than a career in Europe. In the USA, young scientists gain their independence at the moment when they have proven their worth and just as they are becoming most productive. And, once they are on the tenure track they can be reasonably certain that consistent productivity will be rewarded with timely promotion and job security.

There are almost as many different career structures in Europe as there are different nation states, but none of them provides a model of best practice. In France, for example, the law and the unions oppose temporary positions, so there are almost no French postdocs in France and most researchers become lifetime employees of the state before they have really proven their abilities. The UK has the opposite problem: the creation of three- or five-year senior postdoctoral fellowships that allow young researchers to start an independent team has produced a wave of researchers in their mid or even late-30s often with many achievements but with nowhere to go for a tenured position.

US model

In the USA, after a PhD and one or two postdocs researchers are typically around 30 years old. This is the time to decide whether to pursue a career in academia or to follow a different path. Those who opt academia will likely be looking for an Assistant Professorship in an institution that does both teaching and research. Assistant Professors are usually hired on tenure track, meaning that they will then work for 3–7 years before a formal decision is made on whether tenure will be granted. At this point, around the age of 40, the researcher is usually promoted to Associate Professor. In most places, about 50% of Assistant Professors are promoted to Associate Professor with tenure after six years. Unlike the situation in many European countries, the position of Professor, or Full Professor, does not depend on the availability of a vacant 'chair', promotion to Professor being a natural progression from Associate Professor depending on merit.

Of course, not every PhD student or postdoc is going to make it onto the tenure-track ladder and reach Full Professor status, but in the USA competent researchers can have reasonable confidence that their career in academia will not finish in a dead-end or, worse, unemployment.

The wave of scientists who trained after World War II and now occupy many European professorships is coming up to retirement age. At the University of Helsinki, for example, the largest age cohort of professors is of 55–65 years old and will be retiring in the coming 8 years or so. We urgently need

independent, trained young scientists to fill this retirement gap.

Making Europe an attractive place to pursue a career in research is also going to require changes to salaries, research facilities, hiring practices and social security, health and pension rights, making it easier to move from one country to another. But no amount of social reforms will keep scientists in Europe if they cannot be confident that they can progress in their careers. There will be resistance to tearing down the old academic career structures. But people said the same of the university degree structures, yet the EU's Bologna Process to harmonise degrees in higher education has gone a long way towards achieving its objective. With more university students studying outside their home country in Europe, perhaps we can be optimistic that the desire for academic career reform will grow naturally.

Bologna Process: http://europa.eu.int/comm/education/policies/educ/bologna/bologna_en.html

ELSO 2007

A large international conference for life scientists on European soil – that was the original vision and *raison d'être* of ELSO. The organization wanted to create a meeting that would bring the quality and atmosphere of the American Society of Cell Biology annual meetings into a European setting; to provide an opportunity not only to listen to the cream of international life scientists speak about their work, but also to network with future collaborators and to renew old friendships.

Since 2000, ELSO has held five fantastic meetings in Geneva, Nice and Dresden. They have all the features and atmosphere of their stateside cousins: the buzzing poster sessions, the high-tech exhibitors booths, the big-name speakers and the special-interest 'subgroup' meetings that preface the main meeting, while cultivating a more intimate atmosphere than is possible in a meeting with 10,000 participants.

The next ELSO meeting will return to Dresden in September next year (1–4 September, 2007). As usual, ELSO is fighting to keep the cost of the meeting low. In the past, over 40% of the meeting participants have been PhD students and we want to keep it that way by holding down the registration fee for students. Ari Helenius and Maria Leptin, the co-chairs of the Programme Committee for 2007, are hard at work and should have a provisional programme on the web early this summer.

To thrive, the ELSO meetings need more participants at all stages of their careers. So if you have already enjoyed an ELSO meeting – and more than 5,000 European researchers have – why not come to Dresden in 2007 and bring your colleagues with you? Travel to Dresden is easier and cheaper than you might think, and Dresden is a dynamic, revitalised city with a fascinating history and cultural heritage. You can find out more about the Dresden 2007 meeting from our web site. And look out for news about our 2008 and 2009 meetings in Nice and Amsterdam!

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