

Editorial

The time is ripe to unify Europe's academic career structures. We need a common system that awards researchers professional independence and job security at the right moments in their careers.

■ Six years after the announcement by European heads of government that Europe should become the 'number one' knowledge economy in the world by 2010, why is Europe still failing to compete with the USA for scientific talent? Not only does Europe fail to attract researchers from the emerging economies like India and China, but it also often fails to retain its best home-grown talent. There are currently 40,000 European researchers working in the USA, and most of them do not intend to come back! How can Europe develop an atmosphere that attracts and retains the best of the global scientific workforce?

Clearly, we need conditions conducive to good research; good scientific infrastructures – universities, research centres and facilities – and adequate levels of funding delivered through fair, open and competitive mechanisms. But attracting a good supply of well-trained researchers motivated to work in Europe requires not only excellent facilities but also excellent opportunities for individuals to carve out an independent research career.

■ Tenure Track

Europe fails to match the USA in scientific career opportunities for two main reasons: first, its private sector research – in business and privately funded research institutes – is not nearly so well developed, and, second, its academic career structures are archaic and disparate, making it difficult for researchers to exploit opportunities other than in their home system and, often, making it difficult for them to become independent within their home system.

Europe has recognised the advantages that come from encouraging its university students to study outside their home state in the European Union (EU). Through the Bologna Process, which is establishing rules that allow students to earn credits by studying at a university in another EU member state, and through the Erasmus scheme that funds such mobility, we are beginning to see a new generation of graduates with a better education who will become more broad-minded and co-operative European citizens than their predecessors. International PhD programmes are also beginning to be available, and Europe's postdocs have traditionally moved from one country to another (though often to the USA!) in search of wider experience. The roadblock comes at



"Behind one door is tenure – behind the other is flipping burgers at McDonald's."

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the point when a young scientist is looking to establish an independent track as a team leader or 'principle investigator'.

In the USA after one or two postdocs, around the age of 30, one can get onto the 'tenure track' in any state of the union as an Assistant Professor, with a good probability of being promoted – in time and with an adequate track record – to Associate Professor and then to Full Professor with tenure. In Europe, by contrast, a panoply of different systems exist in the various countries, each with its own quirks. Some award tenure, and independence, even before a young researcher has had chance to prove her or his abilities. Others fund independent junior investigators in a

'half-way house' state where they do not participate in the running of their host department or institute and are too often left high and dry with no prospect of a tenured position too late in their careers to move sideways easily. Yet other systems keep their researchers subordinate to the 'Professor' well into their scientific maturity.

■ European reform

For the good health of European science, we need a single academic career structure that encourages movement from one country to another, that gives researchers independence at the moment when they are most productive, i.e. in their late twenties or early thirties, and that gives a reasonable prospect of job security in middle age. This need not be a system identical to the USA's tenure-track system but what it must do is provide a pipeline of trained independent investigators fully competent to fill the jobs that will become available following a wave of retirement and the opening of many new positions as most European countries modernise their research bases. The new European system must also supply leaders – scientists with vision who are trained through their participation as independent investigators in running academic departments – who are competent to take over as heads of departments and institutions.

There is broad interest in the scientific community in reforming career structures. ELSO and other organizations should now start a discussion about how to go about this. It is a problem that needs to be solved for all of Europe.

EMBC European Molecular Biology Conference

Founded: 1970

Purpose: a forum for co-operation between European states to support fundamental research in molecular biology and other closely related areas of research; the EMBC funds a large proportion of EMBO's activities.

Members: 25 states including many European Union countries.

President: Marja Makarow

Financed by: EMBC member states

<http://www.embo.org/embc>

All those acronyms

■ European institutions seem obsessed with acronyms, and most of them begin with 'E': EMBO, ELSO, EMBL, ELSF, ESF... What do these E-words stand for and what is the relationship between the organizations they

represent? Here are a few that molecular life scientists should know about.

EMBO European Molecular Biology Organization

Founded: 1964

Purpose: to promote bioscience in Europe through targeted programmes and activities including: courses, workshops and conferences; fellowships; young investigator awards; *The EMBO Journal* and *EMBO Reports*; science and society and women in science activities. EMBO's offices are on the same site as the EMBL in Heidelberg.

Members: an academy of around 1200 leading researchers in Europe and 100 associate members worldwide; new members elected annually on the basis of proven excellence in research.

Executive Director: Frank Gannon

Financed by: EMBC member states

<http://www.embo.org>

ELSF European Life Science Forum

Founded: 2002

Purpose: a coalition of independent organizations representative or supportive of the life sciences, biotechnology and biomedical research communities in Europe. Its mission is to increase their visibility and impact in the public and policy-making arenas, to advance research and to promote the contribution of scientists to European society.

Members: 13 member organizations including ELSO, EMBO, EMBL and other European life science societies and federations of European societies, including the Federation of European Biochemical Societies (FEBS).

President: Julio Celis

Financed by: member contributions, principally from EMBO, EMBL and FEBS

<http://www.elsf.org>

EPSO European Plant Science Organization

Founded: 2000

Purpose: to improve the impact and visibility of plant science in Europe. Top priorities include facilitating understanding of plant science, boosting funding for basic plant science and co-ordinating research activities on national and EU levels, and beyond. It has held three conferences.

Members: more than 50 leading research institutions, universities and funding agencies from 23 European countries, plus observers from industry.

Executive Director: Karin Metzclaff

Financed by: membership fees

<http://www.epsoweb.org>

ESF European Science Foundation

Founded: 1974

Purpose: to bring together leading scientists and research funding agencies to debate, plan and implement pan-European initiatives. Activities include workshops, research conferences, multinational research projects (EUROCORES) and foresight exercises.

Members: 78 research-funding agencies and academies in 30 European countries.

Chief Executive: Bertil Andersson

Financed by: contributions of ESF member organizations

<http://www.esf.org>

EMBL European Molecular Biology Laboratory

Founded: 1974

Purpose: basic molecular biology research, technology development, service provision and advanced training; EMBL includes a main laboratory in Heidelberg and four outstations at Hinxton near Cambridge (the European Bioinformatics Institute, EBI), at Grenoble (close to the neutron source at the Institut Laue Langevin, ILL, and the X-ray source at the European Synchrotron Radiation Facility, ESRF), at Hamburg (on the campus of the German Synchrotron Research Centre, DESY), and at Monterotondo near Rome (for mouse biology; close to the European Mouse Mutant Archive, EMMA).

Members: 19 member states.

Director General: Iain Mattaj

Financed by: EMBL member states

<http://www.embl.org>

ELSO European Life Scientist Organization

Founded: 1999

Purpose: to hold a large annual meeting of molecular life scientists on European

soil; to represent the interests of molecular life scientists working in Europe in debate about science policy, funding, etc.; to promote the career development of young researchers in this field.

Members: around 5,000 scientists working mainly in Europe

President: Kai Simons

Financed by: sponsorship and membership fees

<http://www.elso.org>

Last call for medal designs

■ In issue 2 of *the ELSO newsletter*, we invited designs for the ELSO Early Career Award trophy. If you have an idea in mind, it's not too late to send it in. So if you have an artistic streak, why not take to your easel, your wheel or your anvil and design a piece of art that will symbolise the best of young life science talent for the years to come? We'll give a prize to the best design. For more details, see issue 2 or contact Carol Featherstone, Co-ordinator of ELSO's Career Development Committee: cdc@elso.org before 15 October 2006.



ELSO Early Career Award: <http://www.elso-cdc.org/M3.shtm>

ERC seeks nominations for panel members

■ Peer review of proposals sent to the ERC, its Scientific Council has announced, will be carried out by panels of independent, high-level scientists and scholars, supported by referees. About 20 panels are planned in the first instance, which will cover all areas of 'frontier research' in the natural sciences, engineering, social science and humanities.

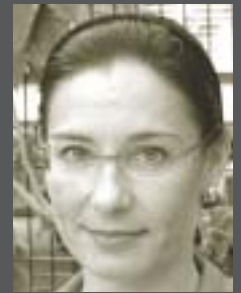
The Scientific Council is in the process of identifying Chairs and members of the panels, which will comprise 10–12 people including one delegate from the Council. As part of this process, it is consulting with various organizations representing the scientific community in Europe, as well as with organizations that fund research in the European Union member states and other countries associated with the EU's Framework Programme. These organizations are being asked to identify candidates of exceptional quality, vision and integrity to serve as panel members and Chairs.

Any organization or funding body may submit candidates according to the requirements outlined in the consultation letter available on the ERC web site, but individuals cannot nominate themselves. The deadline for nominations was in July but the Scientific Council still welcomes carefully selected nominations for future panels.

The Scientific Council of the European Research Council:
<http://ec.europa.eu/erc>

Elections to Council

■ Online elections for two new members of ELSO's governing Council closed on 7 September. The two newly elected Council members are Elina Ikonen (Institute of Biomedicine, Helsinki) and Chiara Zurzolo (Institut Pasteur, Paris). They replace Ralf Pettersson and Roberto Sitia. Congratulations and welcome to Elina and Chiara; and very many thanks to Ralf and Roberto who have made innumerable important contributions to the success of ELSO over the past six years.



Elina Ikonen



Chiara Zurzolo

Online elections to ELSO Council:
http://www.elso.org/ELSO_Election.shtm

Have an idea for an article?

Whether in *Lab Times* or in *the ELSO newsletter*. Let us know about the issues close to your heart: newsletter@elso.org



Plenary session speakers include:

Nenad **Ban**, *Zürich*, Barbara **Cannon**, *Stockholm*, Steve **Cohen**, *Heidelberg*, Pietro **De Camilli**, *New Haven*, Elisa **Izzaualde**, *Heidelberg*, Stefan **Jentsch**, *Martinsried*, Frauke **Melchior**, *Göttingen*, Renato **Paro**, *Heidelberg*, Peter **Walter**, *San Francisco*, Robert **Webster**, *Memphis*, Steve **White**, *Irvine*.

Researchers join forces for change

Creating the European Research Council is an important end in itself, but the road to its inception has also spawned an advocacy group that is bringing together professional organizations from every corner of European research.

It's not every day that molecular biologists sit down with mathematicians, social scientists, physicists and the like to consider what European science needs, but since the creation of the Initiative for Science in Europe (ISE) in 2003, this is precisely what has been happening on a regular basis. A couple of times each year, the ISE brings together around 50 independent organizations interested in the scientific and technological development of Europe in all its guises. This 'coalition of the willing' provides a forum through which organizations representative of researchers and disciplines can provide advice and opinions for Europe's science policy makers.



José M. Gago

The ISE came about as a natural addition to the European Life Science Forum (ELSF; see page 2), which was the driver of early debate about the creation of a European Research Council (ERC). The ELSF wanted to include organizations outside the life science axis in the ERC debate; at its meeting in Dublin in 2003 it invited representative organizations from all fields of investigation several of whom decided to combine their efforts to stimulate the involvement of the whole research community in the debate.

Think tank

Since then, the ISE has played an active part in promoting the ERC and monitoring its development. Notably, it organized three conferences in 2004–5, one in the European Parliament and two at UNESCO in Paris, and it has published two influential letters in *Science*, the first, *Creating a European Research Council*, appeared



Julio Celis

on 6 August 2004, signed by 52 organizations, and the second, *Crucial choices for the nascent ERC*, appeared on 3 March 2006, signed by 57 organizations (the ISE also sent these letters directly to politicians and the European Commission's policy makers).

With the ERC on track to begin its activities in 2007, the ISE is now considering other aspects of European science that need to be addressed by a multidisciplinary 'think tank'. Items on the agenda include: mechanisms to inform Members of the European Parliament about advances in fundamental research and their importance for our society; provision of infrastructures for European science; a new vision of priorities for research funding through the European Union's Framework Programme, and harmonising the academic career structure for researchers across Europe. It is also continuing to monitor the rapid development of the ERC: its autonomy from the European Commission; its procedures for grant applications; the

fairness of its peer review system; the level of bureaucracy in its administration; its adherence to the principle of excellence, and its impact on European universities and other research institutions, for example.



Luc van Dyck

The ISE came together under the Chairmanship of particle physicist José Mariano Gago, who, as Portugal's first Minister for Science and Technology in 2000, was at the heart of negotiations around the notion of a European Research Area and the Lisbon Declaration to make Europe into the world's leading knowledge economy, as well as at the conception of the ERC. Gago stepped down from the ISE in the spring of 2005 when he resumed his post as Minister in the new Portuguese government. Julio Celis, a biochemist at the Danish Cancer Society and President of the Federation of European Biochemical Societies (FEBS), replaced him as Chair. Election of a new ISE President, replacing the Chair, should take place in 2007 according to new rules adopted by the Assembly at its meeting in July.

ELSO and the ISE

Most of the day-to-day activities of the ISE are carried out by the ISE Secretary, Luc van Dyck, who is also Manager of the ELSF. Based at the EMBO offices on the EMBL campus in Heidelberg, the ISE secretariat is managed and sponsored mainly by the ELSF, whose budget is contributed by the EMBL, EMBO and FEBS (see page 2).

ELSO participates regularly in the ISE, attending its meetings and endorsing the two letters in *Science*. It is now contributing to the expanding activities of the ISE by organizing a working group to look at harmonising academic career structures.

ISE: <http://www.initiative-science-europe.org>

Recruiting developmental biologists

The Institut Curie in Paris is planning to recruit 10–15 independent research teams for its new Department of Developmental Biology. The new building that will house the department is should ready by the beginning of 2008. If you are interested in joining this new centre, contact the institute's Director, Prof. Daniel Louvard, before 15 October.

Institut Curie: <http://www.curie.fr>