



European Life Sciences Forum

## Meeting report

Follow-up meeting

Life Sciences in the  
European Research Council

Concrete proposals concerning  
Grants, Infrastructure and Delivery mechanisms

With the support of  
FEBS, EMBO, EMBL and UNESCO



Venice • Wednesday 28 – Thursday 29 May 2003  
UNESCO Regional Bureau for Science in Europe (ROSTE)  
Palazzo Zorzi • Castello 4930 • 30122 Venice • Italy

The meeting entitled “Life Sciences in the European Research Council – Concrete proposals concerning grants, infrastructures and delivery mechanisms” was the second in a series of events organised by the European Life Sciences Forum (ELSF) on the European Research Council (ERC). This meeting, co-sponsored by FEBS, EMBO and EMBL and hosted in Venice by the UNESCO Regional Bureau for Science in Europe (ROSTE), built on a previous public event held in Paris on 19 February 2003 (<http://www.elsf.org/elsferc/elsfercs1.pdf>). The objective of ELSF is to help establish the views of the life sciences community with respect to the ERC, its programmes and mode of action. ELSF also aims to create a dynamic that would reach the decision makers who will establish and fund the new body, so as to ensure that, if it comes to existence, the ERC truly reflects the needs and expectations of the scientific community.

Sixty-five prominent scientists and administrators from across Europe convened in Venice with the aim of delivering concrete proposals on three issues that were stressed in the Paris meeting: the provision of research grants, the support for infrastructures and institutions of excellence, and the delivery mechanisms of the ERC. The meeting was structured in parallel workshops on the three topics, which were coordinated by FEBS, EMBL and EMBO, respectively. A background information document setting the frame of the discussion and containing a series of questions that needed to be addressed was provided to the participants (<http://www.elsf.org/elsferc/elsfercb2.pdf>). A special session of the meeting was dedicated to the role of and perspectives for Eastern and Central European countries within the ERC. The results of the workshops were presented and further discussed in a general assembly of all participants. In a final address, Kurt Vandenberghe, member of the cabinet of European Commissioner Philippe Busquin, reacted to the conclusions of the meeting.

The consensus opinions articulated in the next pages reflect the views of science administrators and practising scientists representing various sub-disciplines of the life sciences in twenty-one European countries and, as such, can be considered indicative of the position on the ERC of the European life sciences community at large. The meeting did not solve all the questions and more discussion is needed, for instance, on the structural elements of the ERC. Other aspects will greatly depend on the amount of funding that will be available. Finally, the discussion on infrastructures revealed problems that could only be solved by a conjunction of actors, including the ERC. Altogether, however, this document reflects the expectations of the life sciences community towards a European Research Council and highlights the essential role that such a body could play in the construction of a genuine European Research Area.

At the end of the meeting it was announced that ELSF and its traditional allies, FEBS, EMBO and EMBL, will organise, in conjunction with EUROSCIENCE, a third meeting to build on the work carried out by the life sciences community and extend it to other scientific disciplines, there being a consensus that the ERC should cover all disciplines, from physics and mathematics to the social sciences and humanities. The meeting, which will gather representatives from major learned societies and scientific organisations in all scientific disciplines as well as other stakeholders, will be held in Dublin on 21-22 October 2003.

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## WORKSHOP 1: RESEARCH GRANTS

**Premises:** The provision of research grants is expected to be one of the core activities of the ERC. Prior to the meeting, there was a general consensus that the programmes should be based on the following principles:

- Support for basic research of the highest level of excellence through open, competitive schemes
- Investigator-driven, bottom-up approach
- Complementarity with EC and national research programmes

The discussion in the workshop and the general assembly reinforced these concepts and further established the following points:

### 1. **Scope and characteristics of the programmes**

- There should be no restrictions with respect to the fields or areas of research covered by the ERC programmes, as expected for an investigator-driven approach relying on the peer review system. In particular, ERC programmes should not artificially focus on so-called emerging and strategic areas.
- There should be no restrictions as to who can apply, the programmes being established on a bottom-up approach.
- Eligibility Criteria:
  - Highest quality
  - Originality
  - Risk taking
  - Provision of a research environment that is attractive for students
  - A trans-national component is viewed as important but not as a pre-requisite
- Application process: There should be at least one call for proposals per year with an expected success rate of about 20%. Calls for expression of interests are acceptable only if they are peer reviewed.

## **2. Research grants characteristics: type, duration and financial aspects**

ERC grants should aim to provide research freedom and budgetary flexibility over a period of time that is sufficient to deliver on the objectives of the project.

- Three types of grants were proposed: junior (start-up), normal and collaborative. In the latter case, *a posteriori* modifications in the partnership must be allowed.
- The grants should be allocated for a period of three years plus an additional two years subject to evaluation, and be renewable. *A posteriori* modifications in the research direction must be allowed.
- No consensus was reached concerning the size of the grants. Some participants advocated few but large grants similar to the Howard Hughes scheme (e.g. € 1 million per year). A minimal level was set at €100-150.000 per year for junior grants, and €200.000 for normal grants.
- Grants should carry a 20% overhead and should be administrated by the host institution.
- There should be no restrictions on the items that can be applied for (consumables, salaries, equipment, travelling, publications costs, etc). As much flexibility as possible should be allocated concerning expenditures. Researchers must be trusted and made accountable.
- Grants should be transferable with the recipient to a new host institution following agreement by the ERC administration

## **3. Miscellaneous**

- It was suggested to look at granting agencies in the US, such as the NIH and the NSF and others to learn from their experience.

## WORKSHOP 2: INFRASTRUCTURES AND INSTITUTIONS OF EXCELLENCE

The focus of this session was to determine the role of the European Research Council in the support for research infrastructures such as bioinformatics and archives, which are critical to EU life sciences. A second topic was the development of Institutions of Excellence.

### I. INFRASTRUCTURES OR SHARED RESOURCES

Resulting from discussions at the workshop 2 and in the general assembly it was determined that the term “infrastructures” was confusing, since in the academic sphere infrastructure generally refers to physical buildings and facilities. The term “shared resources” more accurately reflects the subject of this workshop, and therefore will be used to denote infrastructural support systems such as databases, cell and animal archives, and other emerging common needs of the European scientific research community.

**Premises:** Shared resources are an essential prerequisite of competitive research in the life sciences. They are an essential part of strong basic research environments with a critical mass of scientific excellence. They promote the integration of knowledge across national and international borders and drive interdisciplinarity.

Specialised instrumentation and databases that constitute shared resources are costly and place significant financial burdens on countries or institutes, and are often inadequately funded. Furthermore, there is a perceived fear that funding shared resources would be at the expense of funding of small science in European universities, which for some is a top priority for an ERC. Shared resources, however, are essential instruments for modern science and provide added value that empowers small and large research groups alike. A pan-European approach to infrastructures, therefore, is required.

The approach of the European Commission, through its Framework Programme, is to support access to infrastructures. This is necessary but by no means sufficient: infrastructures are needed to allow others access to infrastructures. Hence, European shared resources in the life sciences need long-term support for their operation and further development to ensure that they are competitive on a world scale. The apparent conflict between funding basic research and shared resources must thus be resolved.

It was the opinion of the participants at the meeting that without an ambitious, concerted plan to implement new and extendable funding instruments for infrastructural development, growth and support, Europe cannot sustain a competitive research programme that showcases the unique talents and diversity of her basic research community. In order to achieve a true European Research Area, a new way to support shared resources is needed that offers:

- Assessment of priority needs and the best possible provider(s)
- Mechanisms for ensuring the quality of the resources
- Stable durable funding
- Critical evaluation of performance as a precondition for continuation of funding
- Flexibility to adjust to changing research needs.

**In this framework, the role of the European Research Council should be to:**

1. Formulate a funding mechanism that reflects the major and evolving requirements for shared resources for European research, providing

- durable support required for stability
- competitive evaluation, as competing for funding ensures quality
- streamlined implementation with accountability

2. Support European shared resources to underpin:

- ambitious research efforts whether by individuals, networks or integrated projects
- a new focus on complex biological problems
- systems approaches to basic, biomedical and applied research
- competitiveness on a worldwide scale
- contribution to international life sciences research programmes

3. Ensure the joint development, by the ERC, the EC and other actors, of a plan on shared resources support with sufficient level of ambition, which clearly defines respective responsibilities and puts in place a sensible support system for world class European shared resources both existing and new ones.

## II. INSTITUTIONS OF EXCELLENCE IN THE LIFE SCIENCES

As happened in the Paris meeting, participants in workshop 2 felt that Institutions of Excellence are essential for the European Research Area. Support for these institutions, however, was not seen as a priority action for the European Research Council.

The following perspectives on Institutions of Excellence were presented:

- The emphasis must be set on excellence and ambition.
- The challenge is to couple the essential creative roles of the individual European research group, and the diversity of European scientific talent, to the equally essential role of European Institutions of Excellence, whether in the form of centres or networks.
- Centres of Excellence are not easy to establish. They can benefit from local or national support. If they are established on a European level, the Centres of excellence should be based on the spirit, not the place. Principles and rules like those governing the European Molecular Biology Laboratory (Heidelberg, Germany) should be copied, for instance, the highest level of excellence, the emphasis set on training, the international recruitment and the frequent staff turnover.

## WORKSHOP 3: ERC DELIVERY MECHANISMS

**Premises:** A prerequisite to the success of the European Research Council within the European scientific community is that any future ERC has a lean and user-friendly administration and management structure. Furthermore, all decisions should be made on a scientific basis through genuinely competitive schemes, without political or non-scientific interference. Notably, the concept of “juste retour” is seen by many as inappropriate and incompatible with genuine competition. The challenge is thus to put in place procedures which respond to these overarching requirements while maintaining the rigour and correctness of procedure which is necessary for all expenditure of public funds.

In this session, the following questions were addressed:

- How should the peer review process be organized?
- How should the call for proposals be organized?
- How should the decisions be translated into transfers of funds?
- How should the reporting processes to the applicants and from the awardees to the ERC be structured?
- What ongoing monitoring will be necessary?
- How should the ERC be founded?

### 1. The Selection Process by Peer Review

The decisions made by the selection panels must be beyond questioning by the applicants because of the quality of the scientists who make the decisions. From this, it derives that:

- The best active scientists must be engaged. This is possible (e.g. it happens for EMBO, the NIH study sections, HHMI, HFSP), but it is not automatic.
- The best scientists get involved if (a) their input is decisive (b) the programme is one in which they believe, (c) they can potentially benefit from, and (d) has at least a 20% success rate.
- Confidentiality in the transferral of documents to the panels was not a matter of concern.
- The selection process must depend on the detailed aim of the programme. For instance, interdisciplinary proposals are best judged by experts of these disciplines working together.

## 2. Call for Proposals

The call(s) for proposals will have to be widely disseminated by the standard mechanisms. The process for submission, refereeing, etc. should be totally electronic and the infrastructure should be in place to allow that to happen from start of the ERC. Furthermore,

- The calls should be open to all topics without limitation.
- A two-step evaluation procedure will probably be required to make the process manageable (if a large number of applications is submitted).
- The first step of the process must involve top quality peer review; the concept of a “one page” first-step application needs further reflection if it is for novel research.
- There should be multiple (2) calls annually at predictable and fixed dates.
- The possibility of accumulating grants from different sources for the same project can be accepted to prevent artificial subdivisions of work; however, it should be avoided if the project is sufficiently funded.
- More thoughts are needed on how to support EU candidate countries and non-EU countries. A separate call could be considered to avoid exclusion of scientists from disadvantaged countries who may not be fully competitive, but the participants in the workshop were far from unanimous that this was desirable. Other support mechanisms were suggested, for instance, extra money (e.g. more overhead) or extra infrastructure for successful applications, or payment to universities where post-doctoral fellows who get funded in another country come from.

## 3. Financial Aspects

The hallmark of the ERC should be that the money is available to be transferred so that it can be made available rapidly to the awardees once a decision is made.

- As to the degree of control and monitoring placed on the funds, details will depend on how much total funding is available and allocated, and on the governance structure.
- Flexible expenditure is needed.
- The auditing must be light from the perspective of the recipient.
- Electronic processes should be used with no money transferred directly to the recipients (i.e. each recipient should have a centralised account with the ERC).
- Mechanisms such as salary top-up may be necessary to avoid brain drain, but are a topic for further discussion.

#### **4. Interaction with and reporting processes to the applicants**

- Feedback to all applicants is very important to highlight potential improvement, which is a component of increasing the quality of science in the long-term, and to ensure transparency in the selection process.
- Detailed feedback is possible only if there is a small number of applications; their could be by a tick box process in phase 1, and detailed in phase 2.
- High-quality scientific administrators will be needed for this task and for the selection of peers for the reviewing process.
- The reviewers should not be overloaded.

#### **5. Monitoring**

- Funded recipients should have the responsibility to perform research in a manner that is in keeping with the basis for which the funding is provided.
- The aim of the ERC is to promote excellence and science and not to control it.
- It should be a high trust system with light controls.
- Possibilities should be kept open for, e.g., site visits.
- Mentoring is desirable.
- Interim reports should not be made public, but final reports should be.

#### **6. Criteria for success of the ERC**

The ERC will require a significant level of funding. It follows that it should put in place some elements to measure its success or otherwise. It was suggested that these would be:

- Acceptance of the ERC by the research community; this is a major metric.
- Quantitative measures must be rejected as they are: (a) superficial (e.g. the number of publications), and (b) due to multiple sources of support. Instead, stories linking basic research to practical measures need to be highlighted
- Care and realism are elements to be considered when projecting the likely achievements of an ERC, e.g. in terms of patents or spin-off companies.

## 7. Other activities in which the ERC and the funded scientists should engage

- An advisory role of the ERC seems inevitable if the best scientists are engaged.
- A potential role in contributing to cohesion on a European level is stressed.
- Linkage with humanities and social sciences is needed for the life sciences.
- The ERC needs to collaborate but not fuse with existing entities such as scientific societies or federations.
- The ERC should not provide support for a special meeting of recipients, as such meetings are important to existing societies.
- Networking should happen if it is scientifically driven.
- Outreach activities should be an essential responsibility of successful applicants.

## 8. Structural elements

The most general vision of the ERC is that it be an entity that covers all areas of research, including the humanities and social sciences, with a very significant budget. This section reflects the views of the participants in the workshop on the processes under which such a body could be established and function in due course.

- There is a need for much more discussion on the structure of the ERC.
- Pilot schemes (proof of principle) do not need to be established. They already exist.
- Great care is needed to ensure that the demonstration phase is not confused with the full ERC.
- Open questions:
  - (a) Should the EU acting through the Council of Ministers (or Prime Ministers) be the founder of the ERC?
  - (b) Should it be a EU Project or intergovernmental project?
  - (c) Should all sections start simultaneously or should the ERC start with life sciences, as part of a stepped or phased plan?
- Challenges:
  - (a) How to get a significant amount of money but maintain autonomy?
  - (b) How to avoid heavy bureaucratic controls if a lot of money is provided?
  - (c) How to get the concept of “joint responsibility” for research into the new EU convention?

## SPECIAL SESSION ON EASTERN AND CENTRAL EUROPEAN COUNTRIES

The session featured leading scientists from six Eastern and Central European (ECE) Countries who presented their views on the establishment and role of an ERC. They highlighted the problems of competitiveness with research systems in their countries, some further arguing that there would always be some level of expectation for “juste retour” from politicians. All participants in the meeting acknowledged the need for strong infrastructures to be competitive, notably to avoid brain loss and bring young, top people back to their home country. Infrastructures in ECE Countries require huge investments. It was, however, clear that the ERC will not do everything and that infrastructure problems (e.g. the support for universities) will not be solved with a grant awarding system. Within this framework, specific (transient) mechanisms and/or provisions might have to be implemented for nationals of ECE Countries.

With respect to the mission of the ERC and the concept of “juste retour”, Kurt Vandenberghe, the representative from the European Commission, argued that the ERC should be based on the sole criterion of excellence and not be used as a cohesion instrument. According to him, countries adhering to the EU will become recipients of EU structural and cohesion funds and it would be a wise decision for these countries to invest at least a part of these funds in science and research infrastructure in order to bridge the gap with current member states. These structural and cohesion funds would not be spent on the basis of excellence, but on the basis of needs as identified and decided by the governments of these countries. He further argued for a (albeit marginal) reduction in the EU agricultural budget in favour of an increase in the research budget for all current and future EU Member States.

The topics of the special session on ECE Countries generated passionate discussions and no unanimous conclusions were reached, leaving room for further discussion. There was, however, a consensus to state that:

- There is a great enthusiasm and support from ECE scientists for the creation of an ERC, as well as a strong interest to join the ERC.
- The ERC has a huge potential impact on European science, including ECE Countries. Notably, the ERC should bring about a clear concept on how research should be organised and carried out.
- Worries can be expressed as to the capacity of ECE scientists to compete successfully for grants, and these need to be addressed.
- Further moves towards the launch of an ERC should not be delayed by discussions on specific cases, for instance, for those about ECE Countries.

The European Life Sciences Forum (ELSF) is a coalition of independent organisations 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.

**ELSF Membership:**

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