



**Contribution of the European Molecular Biology Organization to the
European Commission's Common Strategic Framework for
Research and Innovation Funding Public Consultation**

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The European Molecular Biology Organization promotes excellence in the molecular life sciences in Europe. The core of EMBO is its elected membership of more than 1500 scientists in Europe and throughout the world. The Members' work covers virtually all areas of the life sciences. Coupled with the efforts of the European Molecular Biology Conference (EMBO's funding body comprising 27 Member States from the European Union and neighbouring countries), EMBO's activities are driven by the knowledge of these scientists, their insights about European research communities, and their ideas for future research directions that will benefit society.

In consultation with EMBO Member scientists and with scientists supported by EMBO's Young Investigator Programme, and with additional contributions by Organization staff, EMBO presents here views on a number of questions from the Green Paper *From Challenges to Opportunities: Toward a Common Strategic Framework for EU Research and Innovation Funding*. EMBO identified four questions of particular interest to the Members and Young Investigators, and welcomes the opportunity to submit these responses. These are discussed in two sections, one on funding issues, the other on research policy and innovation. The perspectives do not necessarily represent the viewpoints of each Member or Young Investigator.

I. Funding issues

Making EU research and innovation funding more attractive and easy to access is perhaps the most important step toward making Europe the world's research and innovation leader (*Question 1*). There is widespread concern among scientists that the process for applying for European funding, reporting the use of the funds, and administering awards is burdensome, and the efforts required disproportionate compared to the requirements of other funding bodies.

It is understood that because these are public funds, accountability in seeking and using this money is critical. However, several EMBO members remarked that, for example, an application process that requires a two-day training seminar or the need to hire a company to assist in filling out applications is unsustainable, particularly for scientists working in the new member states. This directly undermines the objective of a widespread culture of innovation throughout Europe.

Further, there is evidence from a wide variety of fields, not just in science, that complicated application and accountability processes do not make for better reporting. Rather, straightforward, plain-language applications and reports would allow scientists to describe clearly their plans and the results of them. As important, it would allow evaluators, and thus the public, to understand what has been gained from their monetary contributions to the research community.

In addition to assuring innovative science, Framework-funded projects also need to address several other criteria, including those that promote a cohesive European science community. Scientists, as part of best practices in research, generally identify the best collaborations as those that grow organically based on common goals and complementary resources. The Framework Programmes have supported both excellent research and collaborations that advance the value of cohesion. However, concern continues to be expressed that the cohesion requirements, particularly the sizes of the collaborations that are required, may conflict with the equally important value of selecting the best research for funding.

It is critical for the Commission to note that these frustrations likely will lead highly qualified researchers simply not to apply for the upcoming Framework funding, challenging the very goals of competitiveness and excellence for Europe.

At the same time, scientists and their research administrators who have experience applying for funds from the European Research Council (ERC; *Question 21*) are virtually unanimous that the ERC application and administration system is more in line with tested and proven mechanisms used by the most successful funding agencies (such as the National Institutes of Health in the United States, and a variety of non-governmental funding agencies worldwide).

More money should be made available to the ERC. While EMBO recognizes that expanding money for one programme almost always involves shrinking funds in other programmes, the relatively small amount of funding for ERC may result in some risk to the success of a programme that is clearly valued by the Commission.

An urgent problem that could be solved by additional funds is the current inability of ERC to fund projects that are ranked as excellent but fall below the funding threshold because of the limited funds available. In addition to the value of the research that could be accomplished in an extension of the programme, in principle a wider variety of projects from a larger number of institutes in different countries could be funded.

For researchers in new member states, it could be useful to have a dedicated funding source that would allow these scientists to strengthen their research programmes immediately and then to allow them to be competitive in ERC (and other) research calls in the future. Such funding could come from programmes focused on cohesion, but of course the precise mechanism and source for such funding would require analysis and discussion.

II. Research policy and innovation

Curiosity-driven research and agenda-driven research each have a place in scientific research and innovation (*Question 9*). One consequence of curiosity-driven research is that its results lead to the possibility of new agenda-driven research to address specific societal goals. Thus EMBO sees a crucial role for curiosity-driven research irrespective of whether it is done under a funding mechanism with no pre-specified agenda, or under a call to deal with a specific societal problem.

How to decide which societal problems need the attention of scientists then becomes a key concern. The transparency of the process leading to the identification of the research areas to be supported must be increased. A broader definition of the calls is likely to elicit higher quality applications and consequently lead to more significant output.

The nature of innovation is indeed wide-ranging (*Question 14*) and thus many approaches to innovation may all lead to success. All science-driven innovation programmes, however, depend on the ability of scientists to be able to train and work at sites that offer unique opportunities. Thus, geographic mobility for researchers was identified as one critical aspect to successful innovation programmes in Europe.

Existing mobility programmes for young researchers seem to be generally sufficient. Senior researchers, however, have very few options. In addition to the funding that would be necessary to increase senior researchers' mobility possibilities, there are structural issues (such as national pension schemes, labor policies, etc.) that are out of the realm of the Common Strategic Framework. It is important to note, however, that these are issues that directly affect European competitiveness and innovation.

Collaborative research in large facilities (i.e., research infrastructures) was identified by many of the Members and Young Investigators as another factor critical for innovation. The European Strategic Forum on Research Infrastructures, ESFRI, is recognized as being the basis for the success of researchers in many scientific fields.

Centralised infrastructure development serves several purposes. For the most part, these infrastructures have very high costs for both initiation and maintenance; practically, these cannot be run by individuals (or even in some cases, could not be run by a country). Significantly for Europe, providing a research resource that would otherwise not be available to individual researchers allows scientists from regions with less-developed science programmes to participate in high-quality research. This expands the base of European scientists who contribute to excellence in research in Europe, and thus to innovation and competitiveness. EMBO strongly supports the strengthening of research infrastructure programmes for Europe.

Further comments

In addition to the responses to these specific questions, EMBO notes that there is recognition by scientists of the importance of programmes that focus on the individual researcher. The Marie Curie Actions and a variety of training initiatives are among the most successful approaches leading to the

success of individuals' research programmes. EMBO runs a fellowship programme co-funded by the European Commission that is recognized as fostering some of the best new European researchers not only in Europe but internationally.

Finally, EMBO itself has several programmes that have the capacity to examine various aspects of science and research policy, particularly with respect to research competitiveness and innovation, and to share those results widely.

EMBO appreciates the opportunity to contribute to this public consultation and looks forward to participating wherever possible in subsequent steps leading to the release of the Common Strategic Framework.