



European Life Sciences Forum

Research Infrastructures for the European Life Sciences

Infrastructures are indispensable instruments required to support research in the modern life sciences. However, it is striking to see that Europe has so far been unable to devise a sustainable funding mechanism even for an infrastructure that is as essential for all life scientists as is the European Bioinformatics Institute (EBI). Generally speaking, the lack of adequately dimensioned mechanisms for the coordinated organisation and funding of infrastructures for the life sciences in Europe poses a threat to the competitiveness of the European research base and the realisation of a European research area.

Irrespective of cost, several mechanisms can be envisaged to create, organise and/or fund the various types of life sciences shared infrastructures, be it through the European Commission, the creation of new intergovernmental organisations, or joint initiatives of public agencies; however, an impetus at the European level is clearly required.

The current European system to decide on priorities for infrastructure support is based on the European Strategy Forum on Research Infrastructures (ESFRI), which provides advice to the European Commission on the infrastructures in all areas of research. ESFRI consists of delegates representing the EU member states and thus represents the national governments. Although this has the benefit of linking the potential funder with the overall system, it does not automatically result in the inclusion of input from the practicing scientists who are best placed to know what their requirements are. It also institutionalises a view of infrastructure which is very appropriate for some disciplines but does not match the needs of the life sciences. Therefore, the European Life Sciences Forum (ELSF) convened a meeting on Research Infrastructures for the European Life Sciences, which gathered some 50 scientists and administrators in Vienna on 5-6 June 2006. The present statement summarizes key points that emerged from the discussions.

ELSF aims to contribute by stimulating a debate on research infrastructures for the Life Sciences to ensure that the particular needs of this community are addressed in a manner that engages all the stakeholders, particularly the Scientists. By doing so it hopes that the special requirements of this group will be recognized and, through this process, similar variations on the infrastructure model which are necessary for other disciplines will be encouraged.

A limited view of infrastructure is that it is something which is extremely expensive and is used in one location by a specialist group of Scientists, i.e. the infrastructure is defined by the structure itself. There are large-scale infrastructures such as synchrotrons that fit well into the standard model and are used by life scientists. However, a more relevant interpretation from the perspective of the life scientist is that an infrastructure provides support which makes the research carried out more efficient. Frequently in the life sciences, information and availability of material, rather than a single instrument, is at the heart of an infrastructure. The bio-informatics infrastructure is a good example that illustrates this point. The human genome sequence is another. Bio-banks and clinical material collections are crucial infrastructures which also require planned support. Additional examples that promote the acquisition, archiving and distribution of broadly or universally required information or materials could form the basis for future infrastructures.

The decision on infrastructures should be inscribed in a long-term vision of where a scientific field will be in 10 to 15 years and be part of a comprehensive research strategy that would help to better delineate priorities. For instance, translational research encompasses a complex sequence from basic research via clinical research to treatment of patients. A variety of research infrastructures are required at each step of this sequence. Hence translational research can only be made a priority if, at the same time, the necessary infrastructures are developed.

In other words, infrastructures are shared resources needed by a community to conduct its research. Infrastructures fulfil additional critical secondary missions by providing services, training scientists and technical staff and contributing to technology development. Furthermore, the development of standards (SOPs) is stimulated by and required for the establishment of research infrastructures. The promotion of this revised view of infrastructures is at the heart of the discussions led by ELSF.

The European Life Sciences Forum 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; and to advance research and to promote the contribution of scientists to European society.

Contact:
Dr Luc van Dyck
European Life Sciences Forum (ELSF)
Meyerhofstrasse 1
D-69117 Heidelberg, Germany
Tel: +49 (0)6221 8891 552
E-mail: luc.vandyck@elsf.org
www.elsf.org