

BBMRI - The Power of Many

Human biological and biomolecular samples are key resources in unravelling the true nature of disease. Collections of biological material such as tissues, cells, blood or DNA extracted from these are stored in what is commonly known as a biobank. Such data becomes very valuable if it can also be linked to medical, environmental and lifestyle information for more complete analysis.

Existing national collections suffer from fragmentation and underutilisation due to lack of commonly applied standards and limited access by investigators. This has systematically hampered the collation of biological samples and data necessary for statistical analysis which in turn has slowed research into potential new treatments for diseases.

In 2008, the Biobanking and Biomolecular Resources Research Infrastructure (BBMRI) was set up to coordinate a large scale biobanking network to share access to available biological samples and biomolecular tools in Europe. This infrastructure will cover major biobanks, molecular resources and biocomputing centres to ensure that the samples are linked to existing databases, scientific literature and statistical expertise.

Understanding Disease

Biological resources are considered the essential raw material for the advancement of biotechnology, human health and R&D in life sciences. If well connected, catalogued and accessible, biobanks provide a crucial resource for academic and industry-based research to treat and prevent human diseases.

Building on existing infrastructures, resources and technology, BBMRI will allow the identification of genetic risk factors ("disease genes") and help define the relationships between genes, the environment and lifestyle. A sharper biology-based definition of disease categories will enhance the development of more effective treatments, reduce undesired and unintended side effects and improve clinical trial design.

This unprecedented network could allow people to become aware of their susceptibility to specific disease conditions, opening the possibility of personalised medicine (targeted diagnostics and treatments). At the same time, BBMRI will support policy and scientific momentum to harmonise ethical, legal and quality standards across Europe.



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European Research Infrastructures

BBMRI is one of the 44 initiatives selected for funding by the European Strategic Forum on Research Infrastructures (ESFRI). The forum brings together senior science policy officials representing the member state ministers, and a senior policy official from the European Commission. They have prepared a Roadmap that



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identifies pan-European Research Infrastructures (RI) of crucial importance to strengthen the European Research Area, in particular for capacity building, but also for strengthening European diagnostics and pharmaceutical industries and thereby improving the health of EU citizens.

These projects have received financial support within the EU's Seventh Framework Programme (FP7) for research and technological development and demonstration. It will cover the initial set up stage that should allow the different initiatives to define and develop mechanisms that can provide the

necessary funding after the preparatory phase. €5 million have been granted to the BBMRI to lay out the construction and operational process that will make its continuation possible.

Challenges

The members of BBMRI have started preparing an inventory of European resources. More than 300 biobanks have been identified and recruited to join BBMRI. The biggest challenges they will face in the set up of the network will be the harmonisation of policies and standards, the establishment of a data protection system and the definition of the legal, ethical and financial governance of this new research infrastructure.

More information

Further information about BBMRI and a list of the participating organizations can be accessed at www.bbmri.eu

To request interviews of contributions from BBMRI contact fernando.anton@iscintelligence.com

BBMRI in numbers:

- BBMRI has received €5 million from the European Commission to be spent in the preparatory phase of the project.
- Launched in February 2008, the participating organisations have 27 months to define the technical, legal, and financial aspects of the project.
- There are currently 51 members (universities, research centres, ministries, research councils) and more than 200 associated partners from 31 different European countries.
- The construction phase will take about 4 years and operational costs are currently estimated at 15€ million a year.
- The construction costs could amount for approximately 170€ million to be raised mostly at the member state level.