

Microbial Resource Research Infrastructure: A Large-Scale Research Infrastructure for Microbiological Services

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Abstract : Microbiological resources and their derivatives are the essential raw material for the advancement of human health, agro-food, food security, biotechnology, research and development in all life sciences. Microbial resources, and their genetic and metabolic products, are utilised in many areas such as production of healthy and functional food, identification of new antimicrobials against emerging and resistant pathogens, fighting agricultural disease, identifying novel energy sources on the basis of microbial biomass and screening for new active molecules for the bio-industries. The complexity of public collections, distribution and use of living biological material (not only living but also DNA, services, training, consultation, etc.) and service offer, demands the coordination and sharing of policies, processes and procedures. The Microbial Resource Research Infrastructure (MIRRI) is an initiative within the European Strategy Forum Infrastructures (ESFRI), bring together 16 partners including 13 European public microbial culture collections and biological resource centres (BRCs), supported by several European and non-European associated partners. The objective of MIRRI is to support innovation in microbiology by provision of a one-stop shop for well-characterized microbial resources and high quality services on a not-for-profit basis for biotechnology in support of microbiological research. In addition, MIRRI contributes to the structuring of microbial resources capacity both at the national and European levels. This will facilitate access to microorganisms for biotechnology for the enhancement of the bio-economy in Europe. MIRRI will overcome the fragmentation of access to current resources and services, develop harmonised strategies for delivery of associated information, ensure bio-security and other regulatory conditions to bring access and promote the uptake of these resources into European research. Data mining of the landscape of current information is needed to discover potential and drive innovation, to ensure the uptake of high quality microbial resources into research. MIRRI is in its Preparatory Phase focusing on governance and structure including technical, legal governance and financial issues. MIRRI will help the Biological Resources Centres to work more closely with policy makers, stakeholders, funders and researchers, to deliver resources and services needed for innovation.

Keywords : culture collections, microbiology, infrastructure, microbial resources, biotechnology

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