

MIRRI: The Strategic Research and Innovation Agenda for 2021-2030

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Aznar R.¹, Lima N.², Soares L.², Legras J.³, IS_MIRRI21 Consortium⁴

¹Spanish Type Culture Collection (CECT) - University of Valencia, ²MUM, Universidade do Minho, ³SPO, University Montpellier, INRAE, Institut Agro Montpellier - (CIRM - Levures), ⁴IS_MIRRI21

The Microbial Resource Research Infrastructure (MIRRI) is the pan-European distributed Research Infrastructure for the preservation, systematic investigation, provision and valorisation of microbial resources and biodiversity. It currently brings together around 50 microbial domain Biological Resource Centres (mBRCs), culture collections and research institutes from ten European countries and one associated country. Among them an initial group of 14 partners and 8 third-parties have been involved in the IS_MIRRI21 H2020 project running from 2020-2023 which aims at consolidating MIRRI and securing its long-term sustainability. The MIRRI's Strategic Research & Innovation Agenda (SRIA) 2021-2030 is among the key results achieved in the project. With the motto "Microbial resources for a green, healthy and sustainable future" the SRIA is aligned with the most relevant global and European strategic agendas and the needs of user communities, to enable them to deliver the maximum value and impacts from their projects, technologies and products. It has been established following an exhaustive and comprehensive exercise of self-analysis, landscape analysis and horizon scanning, anticipating future trends and priorities for research and innovation in Health & Food, Agro-Food, and Environment & Energy, in line with the UN SDGs and the Horizon Europe. Seven strategic areas have been identified which are: Research on pathogenic microorganisms and human / human-animal infectious diseases; Research & Development of new (bio)pharmaceuticals / therapeutic solutions (including antimicrobials, vaccines, phage therapies and microbiome therapeutics – for human use); Research & Development of new, safe, healthy and sustainable food and feed products; Resources and methods for biological management of soils and crops; Resources and methods for biomonitoring and/or bioremediation of microbial pathogens, persistent organic pollutants and plastics in soils and waters; Research & Development of renewable biobased chemicals, materials and bioenergy sources; Rescuing and preserving microbial biodiversity. It is a "living document" to be revised and updated at the rhythm that the global challenges, the research and innovation landscape and the users' needs will dynamically change and evolve. MIRRI has since become involved in 13 high-level European projects (100% success rate), and its position in the European Research Area has also been consolidated since its recognition in 2021 as a 'Landmark' in the Health & Food domain of the European Strategy Forum on Research Infrastructures (ESFRI) Roadmap.

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