



Press Release

MICROORGANISMS: THE KEY TO THE FUTURE OF HEALTH, ENERGY, FOOD AND THE ENVIRONMENT

UNIVERSITY OF TURIN AND CNR AT THE HELM OF THE ITALIAN RESEARCH CONSORTIUM

Italy joins the MIRRI-ERIC consortium, the main European hub for access to a wide range of high-quality microorganisms with important implications for science and economy

On Wednesday 5 March, in the **Rectorate Hall of the University of Turin** (via Verdi 8, Turin), the Italian Node of the MIRRI-ERIC Research Infrastructure, the European consortium for the conservation, characterization, distribution and valorization of biodiversity and microbial resources, was presented.

MIRRI-ERIC brings together **50+ microbial domain Biological Resource Centres** (mBRCs), culture collections and research institutes. The initiative will provide the life science and bioindustrial communities with a single point of access to a wide variety of high-quality microorganisms, their derivatives, associated data and services, with a special focus on health, agri-food, energy and environment sectors.

The Italian National Node MIRRI-IT will be represented by the **CNR** and the **University of Turin**, which will coordinate its activities within the National Coordinators Forum of the Infrastructure.

Starting from the fact that **90% of microbial biodiversity has yet to be discovered**, and that Italy is a global biodiversity hotspot, much remains to be done. However, it should be emphasized that starting in 2017 with the birth of the **Joint Research Unit MIRRI-IT** which brings together 27 Institutions, the Italian microbiological community has made a splendid journey that has led to achieving extraordinary results also thanks to the <u>PNRR SUS-MIRRI.IT</u> project (Strengthening the MIRRI Italian Research Infrastructure for Sustainable Bioscience and Bioeconomy - **coordinated by the University of Turin**).

Italy is among the few countries in the world to boast a network of microbial collections that includes all the main types of microorganisms (viruses, bacteria and archaea, filamentous fungi and yeasts, microalgae) and a large group of experts active in strategic sectors for the development of our country. In addition to the aforementioned agri-food sector, in Italy microorganism collections are at the forefront in the surveillance and rapid diagnosis of pathogens, in the development of new technologies for the bioremediation of contaminated environments, for the discovery of new bioactive molecules to be used in the pharmaceutical and cosmetic sectors and for the production of new biomaterials.





"Microbial biodiversity is of fundamental importance in various ecosystems for the health of plants, animals and humans, and deepening our knowledge of it is essential for the progress of research and innovation in life sciences and biotechnology, as well as for a sustainable, competitive and resilient bioeconomy. The characterization of microbiomes, the identification of still unknown microbial species and the understanding of their functions and interactions are the basis for the development of strategies for the targeted use and control of microbial biodiversity in the agri-food chain, especially for the reduction of the use of fertilizers and pesticides, with a view to sustainability, for an improvement of the quality, safety and competitiveness of agri-food products" - says **Antonio Moretti**, Director of CNR-ISPA and national CNR delegate in MIRRI-ERIC. "Being part of the European MIRRI-ERIC Infrastructure means enhancing the Italian microbial collections in a European network and, at the same time, collaborating with the different communities that deal with microbial resources to obtain the best possible results in terms of scientific, productive, social, and environmental impact."

"Microorganisms are the predominant form of life on our planet, they are omnipresent in the biosphere and essential for the functioning of ecosystems. They are already used in many applications. Microbial biodiversity should, therefore, be considered a precious resource for science and industry, with implications for the economy and finance", adds **Giovanna Cristina Varese**, Full Professor at the University of Turin, Coordinator of the Italian National Node of microbial Collections and Italian representative in the National Coordinators Forum of the Infrastructure.

"Joining the European Research Infrastructure on Microbial Resources MIRRI-ERIC is a great opportunity for Italy, as it allows us to be recognized as an excellence in the sector, having access to exclusive research calls and funds, thus collaborating on strategic European projects. The University of Turin is very proud to lead this team", says **Stefano Geuna**, Rector of the University of Turin.