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UCCCB - Centre for Microbial Conservation and the Development of Bio-based Solutions

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Microorganisms are indispensable for solving the problems faced by today's society. They are key tools for obtaining innovative bio-based solutions to address the challenges we face in many areas, such as the environment, food, health, energy, and more. Microorganisms are, therefore, essential to achieve the UN Sustainable Development Goals. Simultaneously, they play an essential role in the transition towards a bio-economy, serving as a driving force for the development of a circular and environmentally sustainable economy. In this context, the University of Coimbra Bacteria Culture Collection (UCCCB) was created, constituting a reliable and relevant microbiological resource for both scientific and industrial communities. UCCCB, registered as collection No. 1179 (WDCM), was the first culture collection dedicated to bacteria in Portugal registered and recognized by the World Federation of Culture Collections. In addition, UCCCB is also part of the Portuguese microBiological Resource Centre Network (Pt-mBRCN/MIRRI-PT), which is, in turn, part of the pan-European distributed Microbial Resource Research Infrastructure (MIRRI). In this way, UCCCB extends its outreach to national and international communities while contributing to safeguarding the Portuguese microbiological heritage and the implementation of the United Nations Convention on Biological Diversity.

UCCCB's mission is to acquire, identify, characterize, and conserve microbial strains and genetic resources, while simultaneously offering access to microbiological cultures, supplying biological materials, and providing customer-focused services. Being a culture collection, UCCCB ensures continuity with the past by preserving and distributing microbial strains described or cited in publications, while it also keeps novel microorganisms awaiting future exploitation by biotechnology. UCCCB's services include, among others, cell and microbial culturing and identification, development and production of controls and derivatives, proficiency testing, and biomaterial banking. Thus, UCCCB is positioned as a centre for attracting and fostering partnerships between academia, research, companies, and developers, serving as a driving force for the bio-development of the economy and society. UCCCB's primary socio-economic contributions stem from its provision of services, which generate value for its users and potentiate the creation of start-ups and spin-offs. UCCCB's additional contributions encompass income generated from intellectual property rights, commercialization of new products and instruments, the economic value of scientific research outcomes such as publications, organization of scientific events, and promotion of R&D.

Sustainable development can only be achieved with the contribution of microorganisms. Thus, UCCCB, by preserving and distributing microbiological resources, services, and knowledge, is a driving force of bio-development.