The University of Milan (UMIL)

is a public, multidisciplinary, research-intensive university and one of Italy's leading higher education institutions. UMIL consistently ranks among the top Italian universities in international rankings and is the only Italian member of the League of European Research Universities (LERU). It is also a core partner of the 4EU+ European University Alliance, funded under the first pilot of the Erasmus+ "European Universities" initiative. These long-standing engagements are fully aligned with UMIL's Strategic Plan, which prioritises internationalisation, participation in high-quality joint programmes, and the strengthening of sustainable European academic partnerships.

UMIL has extensive experience in international cooperation and student mobility and has developed innovative mobility formats such as shared courses and micro-credentials. Quality assurance is ensured through robust internal systems, including the 4EU+QUALITY framework and ISO-aligned financial and project management procedures. In line with the ERA Policy Agenda and the EU Gender Equality Strategy, UMIL has adopted a Gender Equality Plan and is strongly committed to inclusiveness, academic excellence, and the long-term sustainability and attractiveness of international joint programmes. UMIL comprises 31 highly interdisciplinary departments, organised according to the European Research Council (ERC) classification into the Social Sciences and Humanities, the Physical and Mathematical Sciences, and the Life Sciences. The University offers 157-degree programmes, 36 doctoral programmes, several vocational study programmes, 34 Bachelor's and Master's programmes fully taught in English, and currently coordinates or participates in four Erasmus Mundus Joint Master programmes. With approximately 65,000 students, including over 4,000 international students, UMIL is the fifth-largest university in Italy and has more than 2,100 tenured professors, 150 early-career researchers, and 120 visiting scholars. Research excellence is supported by 53 research centres and reflected in a strong publication and innovation record, providing a solid academic foundation for research-informed teaching.

Principal Investigator:

Francesca Mapelli obtained a PhD in Agriculture Ecology from the University of Milan, Italy. She is an associate professor at the University of Milan. As a microbial ecologist, she is currently conducting research to understand how bacterial populations interact within soil and plant environmental niches, with a focus on plant growth promotion and the spread of antibiotic resistance in agri-food ecosystems in relation to water reuse. She also developed strong expertise in the selection and characterisation of beneficial bacteria that promote plant growth under abiotic stresses, such as water scarcity. Moreover, Dr Mapelli has a strong interest in microbiome-based approaches for the rhizoremediation of polluted soils. She has participated in several international projects and has led the UMIL research unit on national projects. A more detailed CV and the complete list of publications can be found at the following links:

Further details: https://www.unimi.it/en/ugov/person/francesca-mapelli

Publications: https://scholar.google.com/citations?user=8MNz-_0AAAAJ&hl=en&oi=ao

"*Considering the increasing strategic importance of sorghum under water scarcity and climate stress, my main expectation is to contribute a robust microbiome-based framework to enhance the resilience and productivity of this crop across Europe. At UMIL, we will be deeply involved in identifying core microbial taxa consistently associated with sorghum across Europe, providing insights into the functional potential of these communities. In close collaboration with the Hungarian Coordinator, we will contribute to the assessment of root colonisation dynamics using promising plant growth-promoting (PGP) bacterial strains, and we will study how shifts in the microbial community correlate with improved plant performance and yield during long-term PGP inoculation. All in all, this knowledge will serve as the foundation for the future development of microbial-based products (i.e., biostimulants, biofertilizers) for sorghum cultivation, generating results of clear relevance to the European Research Area (ERA) in the domains of sustainable agriculture, microbiome research, and climate adaptation*."