

ENVIRONMENT WORKSHOPS 2024

Environmental Microbiology: Microbes as Safeguards of the Environment



This workshop highlights the vital role that microbes play in maintaining Earth's delicate balance and addresses the United Nations Sustainable Development Goals. With a history dating back billions of years, Earth's interconnected systems—the geosphere, atmosphere, hydrosphere, and biosphere—rely on solar and internal energy sources. However, human activities, such as rapid population growth, resource exploitation, and deforestation, endanger these systems and contribute to climate change.

Microbes, the most abundant life forms on Earth, thrive across various habitats and have a significant impact on sustainability. The workshop delves into microbial biodiversity, evolution, and ecosystems, shedding light on their potential to create a more sustainable planet. Cutting-edge research, using DNA sequencing and advanced techniques, unveils the significance of microbial diversity in ecosystem function.

The workshop addresses the critical issue of soil health and its role in sustainable agriculture. Soil microbiota, a vast bioreactor, plays a pivotal role in nutrient cycling, waste recycling, and ecosystem services. Microbes in soil enhance plant health and productivity through processes like nitrogen fixation and phosphate solubilization. To combat soil crises and greenhouse gas emissions, strategies include treating soil as a patient and promoting global coordination.

Understanding microbial traits, such as communication and physiology, offers insights into predicting and modelling microbial behaviour. The workshop explores how synthetic biology can mitigate environmental pollution and aid in recycling agriculture and industrial waste, leading to sustainable practices.

Zoonosis and pandemic preparedness are also discussed. The workshop highlights the zoonotic origin of COVID-19 and the importance of surveillance at the animal-human interface to prevent future viral spill-overs. Addressing deforestation and climate change-induced animal migration, the workshop stresses the need for warning systems and criteria for assessing zoonotic virus virulence.

The proposed workshop brings together global experts in microbial ecology to foster collaboration and knowledge exchange. By showcasing the multifaceted contributions of microbes to environmental safeguarding, this event aligns with the United Nations' sustainability goals. It offers a platform for emerging researchers to connect, learn, and contribute to solving pressing global challenges through microbiology.

SPEAKERS

Patricia Bernal
Universidad de Sevilla, Sevilla, Spain

Harald Brüssow
Catholic University of Leuven, Leuven, Belgium

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FORMAT OF THE WORKSHOP

The workshop will bring together 19 speakers and a maximum of 35 participants. The scientific program will start in the morning on Tuesday 12th March, and will end on Thursday, 14th. Participants will be invited to present a poster, a number of selected posters will be presented by the sponsored AMI Early Career Program. We will have ample time for formal and informal discussion.

VENUE OF THE WORKSHOP

The workshop will be held in Baeza at the "Sede Antonio Machado", a XVII century building turned into a Conference Center of the International University of Andalusia (UNIA). This building includes a residence where speakers and participants will be accommodated. Baeza is a World Historic Heritage town, renowned for Renaissance and Gothic buildings

MORE INFORMATION:

<https://www.unia.es/environment>

DEADLINE:

For application 15 January 2024

VENUE:

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COLLABORATING ENTITIES:

Applied
Microbiology
International

