IX PhD Students Meeting in Environment and Agriculture

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Pólo da Mitra, Universidade de Évora

Book of abstracts

Title: IX PhD Students Meeting in Environment and Agriculture

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Dear participants,

It is our great pleasure to welcome you to the **IX PhD Students Meeting in Environment and Agriculture**, held in Évora on the 11th and 12th of December 2024. We have put together a two-day program with the aim of encouraging scientific discussion. This Meeting represents an excellent opportunity for young researchers to exchange ideas and to explore new challenges in research regarding Environmental and Agricultural Sciences.

This event is organized by MED – Mediterranean Institute for Agriculture, Environment and Development & CHANGE – Global Change and Sustainability Institute, and IIFA – Institute for Advanced Studies and Research, University of Évora and supported by UNIMED – Mediterranean Universities Union.

The Meeting focuses on eight main areas: Agribusiness; Biology; Environment, Landscape & Sustainability; Biotechnology; Agricultural & Environmental Sciences; Food Sciences; Veterinary Sciences; and Biochemistry. The Meeting includes two invited plenary lectures and several presentations selected from the abstracts submitted by PhD students. In addition, all authors that were not selected for oral communication, will present their work as posters displayed throughout the Meeting.

The PhD Students Meeting in Environment and Agriculture intends to stimulate the interaction between PhD students, to streamline scientific discussion and highlight the ones who will become the researchers of the future.

Finally, we wish to thank the Scientific Committee as well as all the participants who have contributed to the scientific program and hope you will enjoy the Meeting and appreciate the beautiful city of Évora, an UNESCO World Heritage. You should find all detailed information in this book of abstracts, including the detailed programme, abstracts, and a list of participants.

Welcome to Évora!

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Poster 50

Exploring Antimicrobial Activity of Pristine Environment Bacterial Extracts Against Biodeteriogenic Microorganisms

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Biodeterioration caused by biodeteriogenic microorganisms is a significant challenge for the preservation of Cultural Heritage. These microorganisms can harm important artworks, monuments, and historical sites, leading to their deterioration over time. Traditional methods to combat this issue often rely on biocides, which are chemical agents that kill or inhibit these harmful organisms. However, many biocides are highly toxic and can have negative effects on the environment and living organisms, making it essential to find safer alternatives.

One promising solution is to use bioactive metabolites produced by bacteria found in pristine environments. These unique bacteria have evolved to survive in extreme conditions, and they produce antimicrobial compounds that help them fend off other microorganisms. By tapping into these natural compounds, we can create biocontrol agents that are less harmful to the environment and effective against the microorganisms that threaten Cultural Heritage.

The bioactive metabolites from these bacteria can inhibit the growth of competing microorganisms, thus protecting valuable cultural sites. This method could lead to the development of green-safe biocides agents that are both effective and environmentally friendly. By investigating the potential of these natural products, we can make important advances in bioremediation.

Exploring bioactive metabolites from bacteria to combat biodeterioration is a promising direction for future efforts. This method offers a safer and more sustainable approach to preserving Cultural Heritage while also benefiting other sectors, showcasing the potential of nature in solving modern challenges.

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