



Università
degli Studi di
Messina

DIPARTIMENTO DI SCIENZE CHIMICHE,
BIOLOGICHE, FARMACEUTICHE
ED AMBIENTALI



CENTRO UNIVERSITARIO DI RICERCA PER LO STUDIO DEGLI AMBIENTI ESTREMI E DEGLI ESTREMOFILII “Francesco Maria Faranda”

III International Workshop on Extremophiles: “*Extreme Environments and Climate Change: Satellite-Based Monitoring, Extremophiles and Biotechnological Applications*”

Messina, 25th May 2026, Aula “Vittorio Ricevuto” Messina University

In the context of climate change, *Extreme Environments* and *Extremophiles* are increasingly regarded as valuable models for studying the effects of rising temperatures, glacial retreat, ocean acidification, and desertification.

Satellite technologies — including multispectral, hyperspectral, and thermal infrared sensors — provide unprecedented tools for monitoring climate change at a global scale. The integration of satellite data with *in situ* measurements and predictive models enable real-time assessment of glacial mass loss, permafrost thaw, and changes in polar and arid ecosystems, offering essential foundations for biodiversity research.

Extremophiles have evolved unique metabolic pathways to thrive in their environments and, as a result, produce specialized compounds that are often markedly different from those of their “normal” counterparts. Recent advances have led to the discovery of a growing number of novel molecules whose distinctive properties suggest biotechnologically relevant activities, generating increasing interest from industry.

Aims:

The III International Workshop on Extremophiles seeks, through an interdisciplinary dialogue among diverse stakeholders, to:

- provide a comprehensive overview from the environmental context to novel satellite-based monitoring strategies, up to the biotechnological applications of extremophiles;
- foster new scientific collaborations and promote productive initiatives in the field, including national and international research projects;
- contribute to the training of doctoral students and early-career researchers;
- encourage cooperation between universities and industries.

Scientific Committee:

Prof.ssa Teresa Maugeri, Prof.ssa Concetta Gugliandolo, Prof. Salvatore Magazù, Dott.ssa Angelina Lo Giudice, Prof. Miguel Martinez, Prof.ssa Serena Savoca

Organizing Committee:

Prof.ssa Maria Teresa Caccamo, Dott.ssa Maria Papale, Prof. Vincenzo Zammuto

Site: Aula “V. Ricevuto” University of Messina Polo Papardo presence/online

Contributions: Oral contribution, poster

Round table: Future Perspectives: projects and initiatives

Abstract submission: 10/05/26

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