International Workshop on Extremophiles: from Adaptative Strategies to Biotechnological Applications

Centro Universitario di Ricerca per lo studio degli Ambienti Estremi e degli Estremofili (CUR-AEE)

19th December 2023, Messina, Italy - Accademia Peloritana dei Pericolanti, Piazza Pugliatti, 1, Messina

Workshop Information

10:00 – 10:10	Registration	
10:10 – 10:20	Institutional greetings	
10:20 – 10:30	Conference Opening	**Prof. T. Maugeri** (CUR-AEE President) **Prof. S. Magazù** (CUR-AEE Director, CISFA President, UniMe MIFT Department) **Prof. C. Gugliandolo** (CUR-AEE Vice-director, UniMe ChiBioFarAm Department)
10:30 – 11:00	Donato Giovannelli	("Federico II" Naples Universyty, Italy) **Exploration of extreme environments and extremophiles**
11:00 – 11:30	Alessandro Sergi	(MIFT Department, Messina University, Italy) **Cellular intelligence of extremophiles**
11:30 – 12:00	Annamaria Gallo	(STEBICEF Department, Palermo University, Italy) **The environmental and biotechnological role of the microbial community in the hydrothermal ecosystems of Panarea Island**
12:00 – 12:30	Maria Papale	(CNR-ISP, Messina, Italy) **Mercury and microorganisms in snow: bioremediation and biotechnological potentialities**
12:30 – 13:00	Vincenzo Zammuto	(ChiBioFarAm Department, University of Messina) **Surfactants from Extremophiles: old tricks for new challenges in industry and biotechnologies**
13:00 – 14:30	Lunch	
14:30 – 15:00	Miguel Martínez	(University of Concepción, Chile) **Pigments synthesized by extremophilic bacteria with antineoplastic activity**
15:00 – 15:30	Victor L. Campos	(University of Concepción, Chile) **Potentials Biotechnological Applications of Halomonas sp. Isolated from High-Altitude Salts Flats**

15:30 – 16:00	Poster session	1. Hydrocarbon and PCB degrading bacteria in shallow hydrothermal vents (Levante Bay, Vulcano Island) and biotechnological potential in bioremediation field.	2. Life on Mars? Possible analogous "martian-like" life forms from the waterside of Don Juan Pond, the saltiest lake in the driest place on earth (Wright Valley, McMurdo Dry Valleys, Antarctica).	3.Potentialities of exopolysaccharide produced by the thermophilic *Bacillus licheniformis* strain B3-15 in remediation of arsenic-polluted aquatic environments
		4.Hydration capacity of polymers from the marine polyextremophilic Bacillus horneckiae SBP3 and their potential applications in arid or semi-arid soil.	5.Thermophilic Bacillus licheniformis B3-15 of shallow hydrothermal origin as producers of biosurfactant useful in bioremediation of oil-polluted environments.	6.Exploration of intramolecular interaction and OH stretching analysis of Hydrated Lysozyme in presence of Trehalose: Experimental and Theoretical analysis
		7.InfraRed intramolecular vibration mode Investigation of disaccaride induced stability in collagene/water Mixtures	8.Bacteria associated with marine sponges from Antarctica: unexplored frontiers for biodiscovery?	9.Enhancing Biotecnological application through in-Situ trehalose grafting on hydroxyapatite surface
		10.Bacteria from Arctic and Antarctic lakes and their potential application in the PCB degradation challenge	11.Comparison of Thermal Effects in hydrated Nopal powders in the Presence of Trehalose	12.Potential effects of Extremophiles against Desertification and Local Climate Change
		13.Multiscale Spectral Analysis on Raman Data on Lysozime/Trehalose/Water Mixtures	14.Psychrophilic electroactive bacteria as biosensors for the monitoring of marine sediments	15.Thermal Bioprotective Effect of Trehalose in Hyaluronic Acid Water Mixtures
		16.Resilience and Survival Strategies of Black Fungi in Stone -Built Heritage	17.Extremophiles as antiaggregating agents in neurodegenerative diseases	18.Climate Models and Extreme Environments

16:00 – 16:30 **Round Table**

Chairman: Prof. M.T. Caccamo (CISFA Member, UniMe MIFT Department)

Speakers:

Salvatore Magazù (CUR-AEE Director, CISFA President, UniMe MIFT Department)

Alessandro Sergi (UniMe MIFT Department)

Manfredi Longo (INGV)

Maurizio Azzaro (ISP-CNR Director)

Registration fee:
30 € lunch included

Organizing Committee:

Prof. Maria Teresa Caccamo (UniMe MIFT Department, CISFA Member)
Prof. Alessandro Sergi (UniMe MIFT Department)
Prof. Vincenzo Zammuto (UniMe ChiBioFarAm Department)

Scientific Committee:

Prof. Concetta Gugliandolo (CUR-AEE Vice-director, UniMe ChiBioFarAm Department)
Dott. Angelina Lo Giudice (CNR-ISP Messina)
Prof. Salvatore Magazù (CUR-AEE Director, CISFA President, UniMe MIFT Department)
Prof. Miguel Martinez (University of Concepción, Chile)
Prof. Teresa Maugeri (CUR-AEE President)