



# Halophiles 2019

12<sup>th</sup> International Conference on Halophilic Microorganisms  
June 24-28, 2019, Cluj-Napoca, Romania

## Conference Program

### Monday, 24 June, 2019

- 14.00–18.00 REGISTRATION [*Grand Hotel Napoca, <http://hotelnapoca.ro/>*]  
18.00–18.30 Welcome to Halophiles 2019  
18.30–19.30 OPENING LECTURE: **Rick Cavicchioli** Antarctic hypersaline communities – *environmental 'omics' and laboratory studies*  
19.30–21.00 Welcome Dinner [*Grand Hotel Napoca*]

### Tuesday, 25 June, 2019

- 8.00-8.30 REGISTRATION [*Grand Hotel Napoca*]
- SESSION: DIVERSITY & ECOLOGY (I)**  
(CHAIRPERSON: FRANCISCO RODRIGUEZ-VALERA)
- 8.30-9.00 **Mădălin Enache**, “How salted is Romania?”  
9.00-9.30 **Aharon Oren**, “Why wasn't the Dead Sea red in the first half of the 20<sup>th</sup> century?”  
9.30-10.00 **Bonnie Baxter**, “Biogeography, halophiles, and avian mechanical carriers”  
10.00-10.20 **Nikolaos Korovertis**, “The ecological importance of solar saltworks”.
- 10.30-11.00 COFFEE/TEA BREAK
- SESSION: DIVERSITY & ECOLOGY (II)**  
(CHAIRPERSON: MĂDĂLIN ENACHE)
- 11.00-11.30 **Jocelyne DiRuggiero**, “Halite microbiome dynamics”  
11.30-12.00 **Antonio Ventosa**, “Hypersaline environments microbiome: soils versus salterns”  
12.00-12.20 **Nicoletta Perini**, “Purple Spots on ancient parchments vs Red Heats on present-day leathers: the unveiled secret of the salt-cured hides”  
12.20-12.40 **Andrea Cherkouk**, “Interaction of uranium with halophilic microorganisms”  
12.40-13.00 **Noor-Ul-Huda Ghori**, “Uncovering the microbial interactome: The social life of extremophiles”  
13.00-14.00 LUNCH



### SESSION: DIVERSITY & ECOLOGY (III)

(CHAIRPERSON: BONNIE BAXTER)

- 14.00-14.30 **Terry J. McGenity**, "Life in a pinch of salt"  
14.30-15.00 **Francisco Rodriguez-Valera**, "Marine-freshwater transitions require extensive changes in the proteome. What it takes to live without salt"  
15.00-15.30 **Michail M. Yakimov**, "Microbial diversity in the deep-sea anaerobic hypersaline environments with emphasis on the role of anaerobic haloarchaea in C and S cycles"  
15.30-16.00 *COFFEE/TEA BREAK*

### SESSION: DIVERSITY & ECOLOGY (IV)

(CHAIR PERSON: JOSEFA ANTÓN)

- 16.00-16.30 **Kathleen Benison**, "Integrating geology and microbiology to understand preservation of extremophiles in salt minerals"  
16.30-17.00 **Mike Dyall-Smith**, "Haloviruses: the bad, the worse and the surprising"  
17.00-17.20 **Raeid Abed**, "Structural-functional analysis of extremely hypersaline microbial mats from the Arabian Peninsula"  
17.20-17.40 **Fernando Santos**, "Metaviromics asks, metaviroproteomics answers"  
17.40-18.00 Sponsor presentation: **Ionuț Oprea** (*Dextercom. SRL*) "Microbial community analysis"  
18.30-20.30 *SOCIAL PROGRAM: CLUJ-NAPOCA CITY TOUR*

### Wednesday, 26 June, 2019

#### SESSION: BIOCHEMISTRY & PHYSIOLOGY (I)

(CHAIRPERSON: MIKE DYALL-SMITH)

- 8.30-9.00 **Maria S. Muntyan**, "Bioenergetics of haloalkaliphiles"  
9.00-9.30 **Erhard Bremer**, "The extremolytes ectoine and hydroxyectoine: import, synthesis and genetic regulation in response to osmotic stress"  
9.30 -10.00 **Hans-Jörg Kunte**, "Effect of ectoine on DNA: Mechanisms of interaction and protection"  
10.00-10.20 **Laura Czech**, "Synthesis, uptake and excretion of ectoines in the alphaproteobacteria *Hyphomonas neptunium* and *Novosphingobium* sp. LH128".  
10.30-11.00 *COFFEE/ TEA BREAK*

#### SESSION: BIOCHEMISTRY & PHYSIOLOGY (II)

(CHAIRPERSON: ERHARD BREMER)

- 11.00-11.30 **Mechthild Pohlschröder**, "C-terminal lipid-anchoring of *Haloferax volcanii* surface proteins"  
11.30-12.00 **Amy Schmid**, "Co-evolution of transcription and metabolic networks in halophilic archaea"  
12.00-12.20 **Uri Gophna**, "CRISPR-Cas systems in haloarchaea more than just antiviral defense?"

- 12.20-12.40 **Thomas Thompson**, "Quorum sensing: signaling from haloarchaea to bacteria"
- 12.40-13.00 **Hosein Geraili** & Ana Vila Verde, "Molecular mechanisms behind protein halotolerance".
- 13.00-14.00 *LUNCH*

**SESSION: ASTROBIOLOGY**

(CHAIRPERSON: KATHLEEN BENISON)

- 14.00-14.30 **John E. Hallsworth**, "Saturated salt is not a limit for life on Earth"
- 14.30-15.00 Scott Perl & **Bonnie Baxter**, "Mineral preservation and photoprotective attributes of halophilic bacteria and archaea in modern and Permian lakebed environments"
- 15.00-15.30 **Jan Jehlička**, "Raman spectroscopy to detect biomarkers of halophiles in salts of evaporites: from natural colonisations to synthetic inclusions"
- 15.30-16.00 *COFFEE/TEA BREAK*

**SESSION: GENETICS & EVOLUTION**

(CHAIRPERSON: TERRY J. MCGENITY)

- 16.00-16.30 **Thorsten Allers**, "Evolution of chromosome architecture in *Haloferax volcanii*"
- 16.30-17.00 **Jörg Soppa**, "Polyploidy in halophilic Archaea: regulation, evolutionary advantages, and gene conversion"
- 17.00-17.30 **Josefa Antón**, "Viral evolution and diversification: what have we learnt from *Salinibacter* and its viruses?"
- 17.30-17.50 **Rafael R. de la Haba**, "First complete genome sequence of a *Salinivibrio* member and phylogenomics of the whole genus"
- 18.00-19.00 JOINT MEETING OF THE ICSP SUBCOMMITTEES ON 'Taxonomy of Halobacteria' and 'Taxonomy of *Halomonadaceae*'

**Thursday, 27 June, 2019**

**SESSION: DIVERSITY OF HALOPHILIC EUKARYOTES**

(CHAIRPERSON: AHARON OREN)

- 8.30-9.00 **Sabine Filker**, "Diversity patterns and haloadaptation strategies of protists"
- 9.00-9.20 **Andrey Plotnikov**, "The diversity of protist communities in inland saline lakes and rivers of the Volga-Ural steppes (Russia)"
- 9.20-9.50 **Nina Gunde-Cimerman**, "The maverick fungal genus *Wallemia* – from halotolerant *W. mellicola* to halophilic and chaotolerant *W. ichthyophaga*"
- 10.00-10.20 **Cene Gostinčar**, "On generalists and specialists among halotolerant fungi"
- 10.30-11.00 *COFFEE/TEA BREAK*

**SESSION: BIOTECHNOLOGY**

(CHAIRPERSON: ERWIN GALINSKI)

- 11.00-11.20 **Gabriela Teodosiu** "Biotechnological potential of halophilic

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- archaea isolated from Romanian extreme habitats”
- 11.20-11.40 **Bhakti Salgaonkar**, “Coproduction of alpha amylase and polyhydroxyalkanoate by *Halococcus* strain GUVSC8”
- 11.40-12.00 **Sanket Gaonkar** „Halo-thermophilic protease from *Halococcus agarilyticus* GUGFAWS-3 (MF425611)”
- 12.00-12.20 **Ram Karan**, “Single amplified genomes from Red Sea brine pool extremophiles - a source of novel enzymes”
- 12.20-12.40 **Doriana M. Buda**, “Capacity of *Halomicrobium mukohataei* DSM 12886 to overcome silver-induced oxidative stress”
- 12.40-13.00 **Lukas Bethlehem**, “Heterologous low-salt production of ectoine and hydroxyectoine: is *Escherichia coli* the answer?”
- 13.00-14.00 *LUNCH*
- 14.00-14.20 **Jaimi Butler**, “Got Culture? Halophiles for Teachers, Students and our Communities”
- 14.30-17.00 *POSTER SESSION & Poster evaluation for ISSLR Best Poster Award*
- 17.00-17.45 CLOSING LECTURE: **Erwin A. Galinski** “The story of ectoine”
- 18.00-18.30 *Closing Ceremony: ISSLR Best Poster & Best Oral Presentation Awards, Farewell speech*
- 19.00-22.30 *Social Event by Ansamblul “Mugurelul” and Orchestra Simfonică Universitară UBB; Gala Dinner [Grand Hotel Napoca]*

### **Friday, 28 June, 2019**

- 8.30 - 20.00 *Field trips to Salina Turda (<http://salinaturda.eu/>) and Cheile Turzii (Turda Gorge).*