

'ECOGENOMICS OF MICROBES'



Red de Excelencia. Microgen-NET

ALICANTE, 14-17th May 2017.

Universidad Miguel Hernández (UMH)

(Hall of Severo Ochoa Building)

PROGRAM

14th May

18:00 - **PRESENTATION.** Francisco Rodríguez Valera. Universidad Miguel Hernández.

18.30 - **Ian Joint. Marine Biological Association of the UK.** "The oikos of marine bacteria"

19.30 – Welcoming Snack.

15th May

SESSION I- Metagenomics a high resolution lens to examine microbes in the environment

Chair: Michaela Salcher

09.00 - **José de la Torre. San Francisco State University- Department of Biology.**

"Ecogenomics of thermophilic ammonia-oxidizing archaea across three continents".

09:30 - **Rohit Ghai. Institute of Hydrobiology. Dpt. of Aquatic Microbial Ecology Biology Centre ASCR. České Budějovice, (Czech Republic).**

"The enigmatic SAR202 cluster up close: shedding light on a globally distributed dark ocean lineage involved in sulfur cycling".

10.00 - **Manuel Fernandez López- Estación Experimental del Zaidín EEZ-CSIC.**

"The rhizosphere microbiome of burned holm-oak: potential role of the genus *Arthrobacter* in the recovery of burned soils".

10.30 - **Josefa Antón. Universidad de Alicante-UA.**

"Hypersaline systems as natural laboratories to study virus-host interactions".

11.00-11.30 COFFEE

SESSION II- The interaction phage-bacteria

Chair: Josefa Antón.

11.30 - **Oded Beja. Technion-Israel Institute of Technology-Haifa (Israel).** "Cyanophage 'photosynthesis' with viral PSI & PSII proteins".

12.00 - **Matt Sullivan. The Ohio State University- Department of Microbiology- Ohio (USA).**

"Modern methods to determine which virus goes with which host".

12.30 - **Mark van Raaij. Dpto de Estructura de Macromoléculas Centro Nacional de Biotecnología - CSIC- MADRID.**

“Structure and specificity of bacteriophage receptor-binding proteins”.

13.00 - **M^a Ángeles Tormo – Instituto de Investigación Sanitaria- IIS La FE Valencia.** “A new family of Staphylococcus aureus phages isolated from patients with cystic fibrosis”.

13.20 – **Carolina Megumi Mizuno- Unité de Biologie Moléculaire du Gène chez les Extrêmophiles Département de Microbiologie. Institut Pasteur**

“Crossing lines: Viruses encode ribosomal proteins”

13.40 LUNCH

SESSION III- Post-metagenomics ecology

Chair: José de la Torre.

15.30 - **David Scanlan. University of Warwick-School of Life Science.**

“Molecular insights into factors controlling marine picocyanobacterial diversity and abundance”.

16.00 - **Graeme Nicol. University of Aberdeen & École Centrale de Lyon.**

“Genomic and physiological analysis of soil ammonia oxidising archaea: always good, never bad, sometimes ugly”.

16.30 - **Valentín Gordeliy. Institut de Biologie Structurale J.-P. Univ. Grenoble Alpes-CEA-CNRS.**

“From a Phylogenetic Tree to Discovery of Inward H⁺ pump Xenorhodopsin and Alternative Optogenetic Approach”.

17.00 - **Manuel Martinez Garcia. Universidad de Alicante-UA.**

“Is viral metagenomics missing something?: A tale of Single-Virus Genomics”.

16th May

SESSION IV- Intra-species diversity, novel evolutionary paradigms

Chair: Alejandro Mira Obrador.

9.00 - **Paul Jensen. CMBB-Scripps Institution of Oceanography-UC San Diego San Diego (USA)**

“Linking phylogenomic species concepts to functional traits in marine bacteria”.

09.30 - **Michaela Salcher. Limnological Station, Institute of Microbial and Plant Biology, University of Zurich, Switzerland.**

“Microdiversification in genome-streamlined ubiquitous freshwater Actinobacteria”.

10.00 - **Matt Sullivan. The Ohio State University- Department of Microbiology- Ohio (USA).**

“Population genetics of 142 cyanophage genomes: Viruses can behave as ‘species’”.

10.30 – **Mario López Pérez. Universidad Miguel Hernández.**

“Pangenome evolution in the marine bacterium *Alteromonas*”.

10.50 - **Matthias Hötzing. Universität Innsbruck.**

“Diversification and coherence in a species of pelagic freshwater bacteria”.

11.30-12.00 COFFEE

SESSION V – Host-microbe interactions

Chair: Rohit Ghai

12.00 - **Alejandro Mira Obrador. Fundación para el Fomento de la Investigación Sanitaria y Biomédica de la Comunitat Valenciana (FISABIO).**

“Recognition of oral and gut microbes by specific antibodies”.

12.30 – **Miguel Carda Dieguéz. Universidad de Valencia.**

“Evolution of vibrios in natural environment: lessons from a metagenomic study of skin mucus of the eel (*Anguilla anguilla*)”.

13.00 - **Frédérique Le-Roux. Sorbonne Universités, Integrative Biology of Marine Models, Station Biologique de Roscoff.**

“Environmental vibrios : «A walk on the wild side »”.

13.30 - **Juan Imperial- Universidad Politécnica de Madrid. UPM.**

“The sugarcane microbiome: A key element in its sustainability”.

AFTERNOON- ACTIVITY

15.00 LUNCH

17th May

SESSION VI - Network Microgen

Chair: Francisco Rodriguez-Valera

09.00 - **Juan M. González Grau- Instituto de Recursos Naturales. IRNAS-CSIC.**

“The direction of gene transfer among pairs of genomes”.

09.30 - **Margarita Gomila- Universitat de Les Illes Balears. UIB.**

“Phylogenomics of the *Pseudomonas syringae* species group”.

10.00 - **Antonio Bennisar- Universitat de Les Illes Balears UIB.**

“Comparative genomics of non-tuberculous mycobacteria: ecological and clinical implications”.

10.30 - **Nicolás Toro – Estación Experimental del Zaidín. EEZ-CSIC.**

“The Reverse Transcriptases associated to the CRISPR-Cas Systems”.

11.00 - **Mercedes Cervera Alamar- Instituto de Investigación Sanitaria- IIS La FE Valencia.**

“Mobilization mechanism of pathogenicity islands by endogenous phages of *Staphylococcus aureus* in clinal isolates”.

11.30- CLOSURE – Discussion & Suggestions

12.00– Closing Snack.