

XXIX Workshop

Advances in Molecular Biology by
Young Researchers Abroad

22nd December 2021

Organization

Inés Antón
Mar Valés-Gómez

Colaborators

Domingo F Barber	Pablo Pulido
Urtzi Garaigorta	Susana de Lucas
Esther Ortega	Juan Poyatos
Jesús Salvador	Álvaro San Millán

Sponsors



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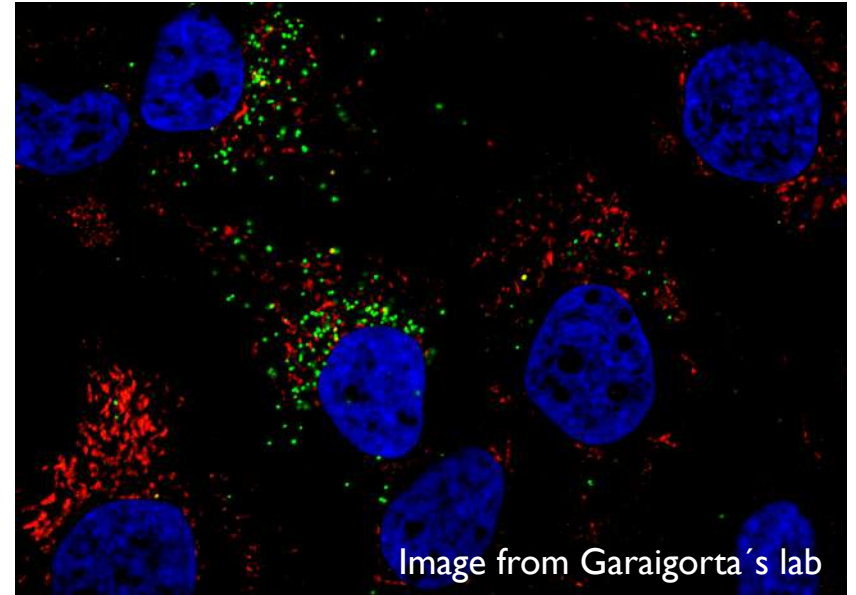


Image from Garaigorta's lab

9:00 Welcome by **Mario Mellado**, CNB director

13:05-14:20 Lunch break and networking

Immunology and Oncology

Chair: **Jesús M. Salvador**

- 9:15 Label-free cell-based MALDI-TOF MS assay identifies anti-inflammatory drugs in acute myeloid leukaemia
José Luis Marín-Rubio
Newcastle University, Newcastle upon Tyne, UK. PI: Matthias Trost
- 9:35 Intraepithelial $\gamma\delta$ T cells shape the Tissue-Resident Memory T cell (T_{RM}) ecosystem
Miguel Muñoz Ruiz
The Francis Crick Institute, London, UK. PI: Adrian Hayday
- 9:55 Enhanced anti-tumor efficacy of CAR T cells by SUV39H1 ablation
Sheila López Cobo
Institut Curie, Paris, France. PI: Sebastián Amigorena
- 10:15 Notch signalling regulates bone metastatic dormancy and activity in ER+ breast cancer
Angélica Santiago Gómez
Manchester Breast Centre, University of Manchester, UK. PI: Robert Clarke
- 10:35 D-lactate enhances T cell functionality by limiting mitochondrial ROS production during activation
Adrián Madrigal Avilés
German Rheumatism Research Center (DRFZ), Berlin, Germany. PI: Max Löhning

10:55-11:45 Coffee break

Molecular Biology of Plants

Chair: **Pablo Pulido**

- 11:45 Tapping the unused potential of photosynthesis
Alejandro Torrado Maya
University of Southampton, UK. PI: Thomas S. Bibby
- 12:05 Shaping microbial physiology through a PTS^{Ntr} carbon and nitrogen switch
Carmen Sánchez Cañizares
University of Oxford, UK. PI: Phil Poole

Systems biology

Chair: **Juan F. Poyatos**

- 12:25 High-throughput functional characterization of protein phosphorylation sites in yeast
Cristina Viéitez
European Molecular Biology Laboratory (EMBL), Heidelberg, Germany. PIs: Pedro Beltrao & Nassos Typas
- 12:45 Engineering microbial communities with global epistasis
Juan Díaz-Colunga
Department of Ecology & Evolutionary Biology and Microbial Sciences Institute, Yale University, USA.
PI: Álvaro Sánchez

Microbiology

Chair: **Álvaro San Millán**

- 14:20 Role of Pseudomonas specialised metabolites in Streptomyces scabies inhibition
Alba Pacheco Moreno
John Innes Centre, Norwich, UK. PI: Jacob Malone

Structure of Macromolecules

Chair: **Esther Ortega**

- 14:40 Trained immunity: Energy landscapes of CRISPR/Cas R-loop formation from ultrafast twist measurements
Julene Madariaga Marcos
Peter Debye Institute for Soft Matter Physics, Leipzig University, Germany. PI: Ralf Seidel
- 15:00 Studying virus maturation with cryo-electron microscopy
Roger Castells Graells
University of California Los Angeles, USA. PI: George Lomonosoff
- 15:20 Combining cryo-electron tomography and in silico simulations to study membrane-embedded receptors
Borja Rodríguez de Francisco
Pasteur Institute, Paris, France. PIs: Niels Volkman & Dorit Hanein
- 15:40 Effect of Condensin on the supercoiling degree of DNA
Alejandro Martin Gonzalez
Delft University of Technology, The Netherlands. PI: Cees Dekker

Round table

Chair: **Inés M. Antón**

- 16:00 Futuras líneas estratégicas prioritarias de investigación en España
- Gonzalo Arévalo**
General Director for Research Planning, Ministry for Science and Innovation
- Victoria Moreno Arribas**
Vice-President of the Scientific-Technical Areas, CSIC
- José María Medina Jiménez**
Vice-President of the Scientific advisory Board, Ramón Areces Foundation