Universidad Internacional de Andalucía

WORKSHOPS "CURRENT TRENDS IN BIOMEDICINE"

2022

SEDE ANTONIO MACHADO
BAEZA, SPAIN

CELLULAR PLASTICITY IN HOMEOSTASIS AND DISEASE

Baeza, Spain • 7th-9th November 2022

Organized by:

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SCOPE

The establishment of cell identity in multicellular organisms has been classically studied in the context of embryonic development. Plasticity, the ability of cells to undergo phenotypic shifts reflecting cell identity changes, can be transient - in response to damage - or cells may not fully recover. A special type of plasticity is the epithelial-mesenchymal transition (EMT) which provides a molecular and functional link between development and cancer. Stem cells play a key role in plasticity processes. The discovery of methods to reprogram somatic cells into induced pluripotent cells (iPS) has opened a new chapter in the study of plasticity. The mechanisms involved imply the canonical or ectopic activation of transcriptional programs, often accompanied by epigenetic changes. At the basis of these shifts in cell identity lies the modification of chromatin structure, involving epigenomic and transcriptional changes. New technologies for the study of chromatin configuration in cells, in combination with single-cell analyses, can now reveal how gene expression programs are established with an unprecedented resolution. The exploitation of the genome-wide strategies has called for the design of novel bioinformatics methods for the analysis of massive data and the use of computational tools to identify the functional networks involved in the generation, maintenance, and perturbation of cell identity. The workshop will cover topics related to EMT, senescence, reprogramming, cancer, neural plasticity, single cell genomics, epigenomics, and evolution using a variety of molecular,

cellular, and organismal models. We aim at finding and discussing commonalities and specificities in the mechanism governing development, adult homeostasis, and disease.

The workshop will bring together 15 internationally recognized scientists and 35 participants. Invited speakers will be asked to present unpublished work. We will select talks from young principal investigators and postdocs to promote a fertile interaction among those attending the meeting.

FORMAT OF THE WORKSHOP

The workshop will bring together a maximum of 15 speakers and 35 participants, to form a group of around 50 people. The scientific programme will start in the morning of Monday, November 7th, and will end around noon on Wednesday, November 9th. Ample time for informal discussion will be reserved. Participants will be invited to present a poster.

VENUE OF THE WORKSHOP

The workshop will be held in Baeza, at the "Sede Antonio Machado", a XVII century building turned into a Conference Centre of the Universidad Internacional de Andalucía (UNIA). This Seat includes a residence, where participants will be accommodated. Baeza is a World Historic Heritage town, renowned for its Renaissance and Gothic buildings.

SPEAKERS

Helen M. Blau — Baxter Laboratory for Stem Cell Biology, Department of Microbiology and Immunology, Stanford University School of Medicine. Stanford, CA, USA.

Isabel Fariñas Departamento de Biología Celular, Biología Funcional y Antropología Física, Instituto de Biotecnología y Biomedicina, and CIBERNED, Universidad de Valencia. Valencia, Spain.

Thomas Graf Center for Genomic Regulation, The Barcelona Institute of Science and Technology (BIST) / Universitat Pompeu Fabra. Barcelona, Spain.

Jacob H. Hanna Department of Molecular Genetics, Weizmann Institute of Science. Rehovot, Israel.

Pedro L. Herrera Department of Genetic Medicine & Development, Faculty of Medicine, University of Geneva. Geneva, Switzerland.

Michael Levine Lewis-Sigler Institute for Integrative Genomics / Department of Molecular Biology; Princeton University. Princeton, NJ, USA.

Irene Miguel-Aliaga MRC London Institute of Medical Sciences and Imperial College London. London, UK.

Pura Muñoz-Cánoves Department of Experimental & Health Sciences, University Pompeu Fabra, CIBERNED; ICREA. Barcelona / Centro Nacional de Investigaciones Cardiovasculares. Madrid; Spain.

M. Ángela Nieto Instituto de Neurociencias (CSIC-UMH). Sant Joan d'Alacant (Alicante), Spain.

Francisco X. Real Epithelial Carcinogenesis Group, Spanish National Cancer Research Centre-CNIO; CIBERONC. Madrid / Departament de Ciències Experimentals i de la Salut, Universitat Pompeu Fabra. Barcelona; Spain.

Wolf Reik	Epigenetics Programme, The Babraham Institute / The Wellcome Trust Sanger Institute. Cambridge, UK.
Manuel Serrano	Catalan Institution for Research and Advanced Studies (ICREA) / Institute for Research in Biomedicine (IRB Barcelona), The Barcelona Institute of Science and Technology (BIST). Barcelona, Spain.
Didier Y. R. Stainier	Department of Developmental Genetics, Max Planck Institute for Heart and Lung Research. Bad Nauheim, Germany.
Claudio D. Stern	Department of Cell and Developmental Biology, University College London. London, UK.
Fiona M. Watt	EMBO. Heidelberg, Germany.

DEADLINE: 9th SEPTEMBER 2022

MORE INFORMATION AND APPLICATION:

http://www.unia.es/biomedicine

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