

# WORKSHOPS

## CURRENT TRENDS IN BIOMEDICINE 2019

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# FROM CANCER TO DEVELOPMENTAL DEFECTS: THE CONTROL OF DNA SEGREGATION AND HUMAN DISEASE

### SCOPE

The segregation of chromosomes during cell division is a critical event that must be strictly regulated to protect against disease. Problems during the distribution of the genomic material in mitosis are associated with tumorigenesis, while errors during chromosome segregation in meiosis, the process by which gametes are generated, is a leading cause of spontaneous abortion and can result in different genetic disorders. To protect against these errors, cells have developed an elaborate machinery to control the segregation and proper distribution of the chromosomes during their division. Surveillance mechanisms monitor this process to ensure its fidelity and the maintenance of a correct cellular ploidy.

During this Workshop, we aim to provide an overview of our present knowledge about the process of chromosome segregation and the implications of improper distribution of the genomic material for human disease. The workshop will feature novel and fascinating research from outstanding scientists in the field who will present their latest insights into these fundamental aspects of cell division. The topics that will be covered during this workshop include the organization and preparation of the chromosomes for their segregation during cell division both during mitosis and meiosis, the assembly and regulation of the machinery that distributes the chromosomes between daughter cells, the checkpoints that safeguard a correct cellular ploidy, and the consequences of acquiring an incorrect cellular karyotype for human disease.

### 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, October 14<sup>th</sup>, and will end around noon on Wednesday, October 16<sup>th</sup>. 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

**Dean S. Dawson.** Program in Cell Cycle and Cancer Biology, Oklahoma Medical Research Foundation / Department of Cell Biology, University of Oklahoma Health Sciences Center; Oklahoma City, OK, USA.

**Christian H. Haering.** Cell Biology and Biophysics Unit, Structural and Computational Biology Unit, European Molecular Biology Laboratory (EMBL). Heidelberg, Germany.

**Susanne M. A. Lens.** Onco Institute / Center for Molecular Medicine; University Medical Center Utrecht, Utrecht University. Utrecht, The Netherlands.

**Ana Losada.** Chromosome Dynamics Group, Molecular Oncology Program, Spanish National Cancer Research Centre (CNIO). Madrid, Spain.

**Marcos Malumbres.** Cell Division and Cancer Group, Spanish National Cancer Research Centre (CNIO). Madrid, Spain.

**Adele L. Marston.** Wellcome Centre Cell Biology, Institute of Cell Biology, School of Biological Sciences, University of Edinburgh. Edinburgh, UK.

**Enrique Martínez-Pérez.** MRC London Institute of Medical Sciences / Institute of Clinical Sciences, Imperial College London; London, UK.

**Sarah E. McClelland.** Barts Cancer Institute, Queen Mary University of London. London, UK.

**Fernando Monje-Casas.** Centro Andaluz de Biología Molecular y Medicina Regenerativa (CABIMER), Consejo Superior de Investigaciones Científicas (CSIC). Sevilla, Spain.

**Jonathon Pines.** The Institute of Cancer Research. London, UK.

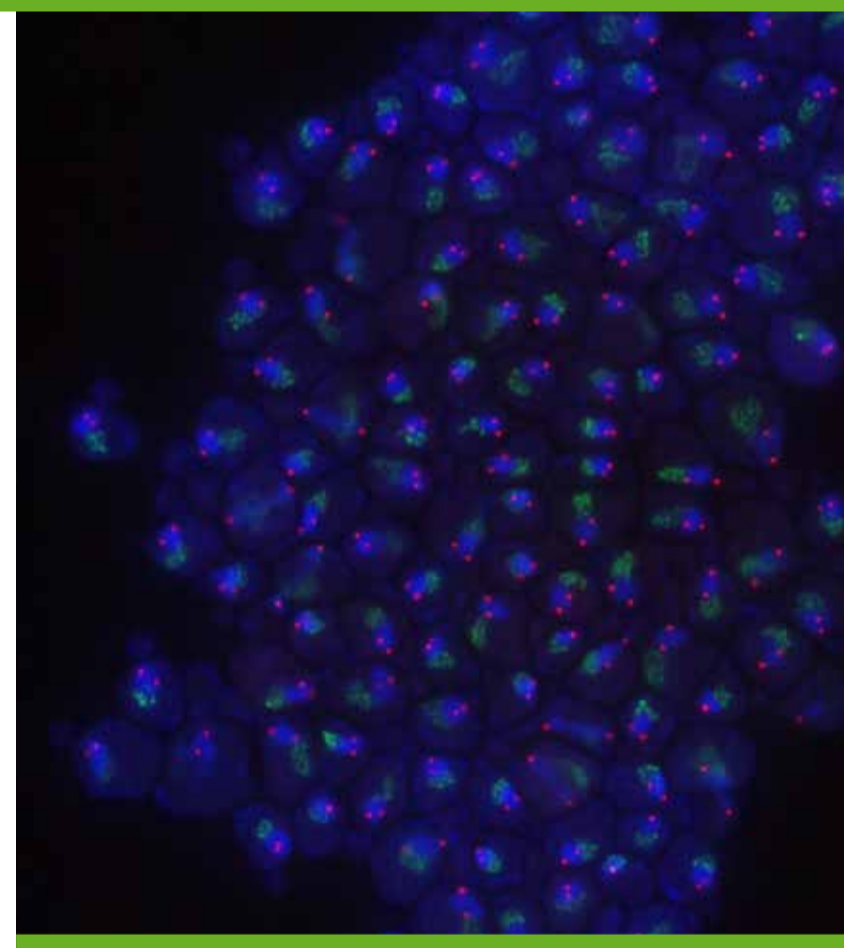
**Joan Roig.** Institut de Biologia Molecular de Barcelona (IBMB-CSIC). Barcelona, Spain.

**Benjamin D. Rowland.** Division of Gene Regulation, The Netherlands Cancer Institute. Amsterdam, The Netherlands.

**Thomas Surrey.** The Francis Crick Institute. London, UK.

**Isabelle Vernos.** Cell and Developmental Biology Programme, Centre for Genomic Regulation (CRG), The Barcelona Institute of Science and Technology / Institució Catalana de Recerca i Estudis Avançats (ICREA) / Universitat Pompeu Fabra (UPF); Barcelona, Spain.

**Katja Wassmann.** Institut de Biologie Paris Seine; Developmental Biology Lab / Sorbonne Université; CNRS, UMR7622. Paris, France.



### ORGANIZED BY:

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Edinburgh, UK.

**Fernando Monje-Casas**  
Sevilla, Spain.

**Joan Roig**  
Barcelona, Spain.

**Baeza, Spain**  
14<sup>th</sup>-16<sup>th</sup> October 2019

**Deadline:**  
26<sup>th</sup> July 2019

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