



# Barcelona BioMed Conference Stem Cells and Cancer October 4-6, 2021

## Monday, 4 October

8.30 Registration

9.00 Welcome by Francesc Posas (Institute for Research in Biomedicine, Director) and organizers (Eduard Batlle & Hans Clevers)

### Session I

Chair: Elaine Fuchs

9.15 **Skin Stem Cells: Survival of the Fittest**

Elaine Fuchs, Howard Hughes Medical Institute, The Rockefeller University (NY, USA)

9.50 **Quiescent stem cells and cancer cells evade T cell attack**

Judith Agudo, Dana-Farber Cancer Institute, Harvard Medical School (Boston, MA, USA)

10.25 **Short talk 1: Dissecting the role of p53-activated target gene ZMAT3 in cancer development**

Ana Janic, Universitat Pompeu Fabra (Barcelona, Spain)

10.45-11.30 *Coffee break and poster session*

11.30 **Short talk 2: Chromosome 9p21.3 Coordinates Cell Intrinsic and Extrinsic Tumor Suppression**

Francisco Barriga, Memorial Sloan Kettering Cancer Center (NY, USA)

11.50 **Regulation of Hematopoietic and Leukemic Stem Cells**

Andreas Trumpp, Deutsches Krebsforschungszentrum (Heidelberg, Germany)

12:25 **Unraveling the determinants of stem cell heterogeneity through multiplexed single-cell lineage tracing**

Alejo Rodríguez-Fraticelli, IRB Barcelona (Barcelona, Spain)

13.00-14.30 *Lunch & Poster session (IEC courtyard)*

## Session II

Chair: Owen Sansom

- 14.30 **The origins of somatic mosaicism in colonic epithelium** (Online)  
Doug Winton, Cancer Research UK Cambridge Institute (Cambridge, UK)
- 15.05 **Retrograde movements determine effective stem cell numbers in intestinal crypts**  
Jacco van Rheenen, Netherlands Cancer Institute and OncoCode Institute (Amsterdam, The Netherlands)
- 15.40 **Short talk 3: Mutant clones in normal epithelium outcompete and eliminate early esophageal micro-tumors**  
Bartomeu Colom, Wellcome Sanger Institute, Cambridge, UK
- 16.00-16.30 *Coffee break*
- 16.30 **Short talk 4: Levelling out differences in aerobic glycolysis neutralizes the competitive advantage of oncogenic PIK3CA mutant progenitors in the esophagus**  
Albert Herms, Wellcome Sanger Institute, Hinxton (Cambridge, UK)
- 16.50 **Wnt signal regulation in intestinal stem cell and cancer** (Online)  
Vivian Li, The Francis Crick Institute (London, UK)
- 17.25 **Dietary control of stem cells in physiology and disease**  
Ömer Yilmaz, Koch Institute for Integrative Cancer Research (Cambridge, MA, USA)
- 18.00 **Understanding the mechanistic underpinnings of transformation of Apc deficient stem cells**  
Owen Sansom, Beatson Institute (Glasgow, UK)
- 18.35 *End of session*
- 20.00 *Speakers dinner (Restaurant Fonda España) (Sant Pau, 9-11)*

## Tuesday, 5 October

### Session III

Chair: Karuna Ganesh

- 9.15 **Paracrine survival signaling upon stem cell depletion in colorectal cancer**  
Florian Greten, Georg-Speyer-Haus, Institut für Tumorbologie und experimentelle Therapie (Frankfurt, Germany)
- 9.50 **Short talk 5: Unravelling the role of early dissemination in colorectal cancer**  
Julie Pannequin, IGF, Univ. Montpellier, CNRS, INSERM (Montpellier, France)

10.10 **Short talk 6: The comparative roadmaps of reprogramming and transformation unveiled that cellular plasticity is broadly controlled by a c-Myc/Atoh8/Sfrp axis**  
Fabrice Laval, Cancer Research Center of Lyon (Lyon, France)

10.30-11.15 *Coffee break and poster session*

11.15 **Drug-tolerant persister cells in colorectal cancer**  
Eduard Batlle, IRB Barcelona/ ICREA (Barcelona, Spain)

11.50 **Modeling human colon cancer stem cells using organoid technology (Online)**  
Toshiro Sato, Keio University School of Medicine (Tokyo, Japan)

12.25 **Dissecting Metastatic Plasticity**  
Karuna Ganesh, Sloan Kettering Institute and Gastrointestinal Oncology Service, Memorial Sloan Kettering Cancer Center (NY, USA)

13.00-14.30 *Lunch (IEC courtyard)*

#### Session IV

Chair: Ilaria Malanchi

14.30 **Immune Regulation of Metastasis Initiating Cells (Online)**  
Joan Massagué, Sloan Kettering Institute, Memorial Sloan Kettering Cancer Center (NY, USA)

15.05 **Short talk 7 Antigen presentation machinery regulation shapes immunoediting of cancer stem cells during immune-checkpoint blockade resistance**  
Toni Celià-Terrassa, Hospital del Mar Medical Research Institute (IMIM), (Barcelona, Spain)

15.25 **ER+ breast cancer metastasis cell fate-mapping**  
Roger Gomis, IRB Barcelona/ ICREA (Barcelona, Spain)

16.00-16.30 *Coffee break*

16.30 **Mechanisms regulating tumor transition states**  
Cédric Blanpain, WELBIO, Université Libre de Bruxelles (Bruxelles, Belgium)

17.05 **Short talk 8 A developmental cellular hierarchy in melanoma uncouples growth and metastatic phenotypes**  
Panagiotis Karras, VIB Center for Cancer Biology (Leuven, Belgium)

17.25 **Interplay between metastatic initiating cells and tumour-associated Schwann cell activation to drive metastasis: role of dietary fatty acids**  
Salvador Aznar Benitah, IRB Barcelona/ ICREA (Barcelona, Spain)

18.00 **The Inside out Stemness of Metastasis**  
Ilaria Malanchi, The Francis Crick Institute (London, UK)

18.35 *End of session*

20.00 *Speakers and Short talks dinner (Restaurant Sagardi 1881, Museu d'història de Catalunya, Palau de Mar) (Plaça Pau Vila, 3, 4th floor)*

## **Wednesday, 6 October**

### **Session V**

**Chair:** Tuomas Tammela

- 9.15 **Organoids to Model Human Disease**  
Hans Clevers, Hubrecht Institute (Utrecht, The Netherlands)
- 9.50 **Drosophila developmental tumours recapitulate distinct traits of pediatric cancer**  
Cayetano González, IRB Barcelona/ICREA (Barcelona, Spain)
- 10.25 **Short Talk 9 Identifying the role of cell plasticity “first” in driving adaptive evolution to therapeutic stresses in solid paediatric cancer**  
Alejandra Bruna, The Institute of Cancer Research (London, UK)

10.45-11.30 *Coffee break and poster session*

- 11.30 **Mechanisms driving differentiation of highly plastic pancreas cancer cells**  
Tuomas Tammela, Memorial Sloan Kettering Cancer Center (NY, USA)
- 12:05 **Short Talk 10 Aggressive PDACs Show Hypomethylation of Repetitive Elements and the Execution of an Intrinsic IFN Program Linked to a Ductal Cell of Origin**  
Elisa Espinet, German Cancer Research Center (DKFZ) (Heidelberg, Germany)
- 12.25 **Liver organoids for the study of cellular plasticity in regeneration and cancer**  
Meritxell Huch, Max Planck Institute of Molecular Cell Biology and Genetics (Dresden, Germany)

13.00-14.30 *Lunch (IEC courtyard)*

### **Session VI**

**Chair:** Meritxell Huch

- 14.30 **Cell heterogeneity and hierarchy in Glioblastoma (GBM) (Online)**  
Luis Parada, Memorial Sloan Kettering Cancer Cells (NY, USA)

- 15.05 **Short Talk 11 Modelling intra-tumour heterogeneity and plasticity in single cell-derived three-dimensional branching pancreatic cancer organoids**  
Aristeidis Papargyriou, Technical University of Munich (Munich, Germany)
- 15.25 **Short Talk 12 Differentiation therapy in colorectal cancer**  
Maxim Norkin, École Polytechnique Fédérale de Lausanne (EPFL) (Lausanne, Switzerland)
- 15.45-16.15 Coffee break
- 16.15 **Organoid modeling of lung disease and early stage lung cancer (Online)**  
Carla Kim, Harvard Stem Cell Institute (Cambridge, MA, USA)
- 16.50 **Organoid modeling of clonogenicity during tumor evolution and drug response (Online)**  
Calvin Kuo, Stanford University School of Medicine (Stanford, CA, USA)
- 17.25 ***Concluding remarks and end of conference***