



INSTITUTE  
FOR RESEARCH  
IN BIOMEDICINE

# Barcelona BioMed Conference

## CANCER IN CONTEXT: cellular, tissue, and organismal determinants of malignant fates

### 27- 29 November 2023

#### Monday, 27 November

8.30 Registration

9.00 Welcome by Dr. Francesc Posas (IRB Barcelona, Director)  
and organizers (Dr. Direna Alonso-Curbelo and Dr. Tuomas Tammela)

#### Session I: From mechanism to phenotype: emerging concepts and technologies

9.15 **What makes a cell competent to cause cancer?**  
Dr. Richard White, Ludwig Institute for Cancer Research (Oxford, UK)

9.50 **Lessons from the past to predict the future: epigenetic memory in chronic lymphocytic leukemia**  
Dr. Iñaki Martin-Subero, IDIBAPS/ICREA (Barcelona, Spain)

10.25 **Short talk 1: In vivo screening of tumor-hepatocyte interactions identifies Plexin B2 as a gatekeeper of liver metastasis**  
Costanza Borrelli, ETH Zurich (Basel, Switzerland)

10.40 -11.15 *Coffee break and poster session*

11.15 **Epigenetic influence of fatty acid metabolism on metastasis: consequences on cachexia**  
Dr. Salvador Aznar Benitah, IRB Barcelona/ICREA (Barcelona, Spain)

- 11:50 **Short talk 2: Unraveling the role of cancer-associated small open reading frames using an in vivo CRISPR screen**  
Fabiola Valdivia-Francia, Institute For Regenerative Medicine, University of Zurich (Zurich, Switzerland)
- 12.05 **Short talk 3: Functional Dissection of the Basal Cell State in Pancreatic Cancer**  
Dr. Anupriya Singhal, Memorial Sloan Kettering Cancer Center (New York, NY, USA)
- 12.20 **Investigating tumor evolution and tumor-immune interactions using cancer genetically engineered mouse models of cancer**  
Dr. Tyler Jacks, Koch Institute for Integrative Cancer Research at MIT (Cambridge, MA, USA)

12.55 -14.00 *Lunch and poster session*

## **Session II: Evolutionary trajectories in premalignancy and cancer**

- 14.00 **Somatic mutation landscapes in large human cohorts**  
Dr. Iñigo Martincorena, Wellcome Sanger Institute (Cambridge, UK)
- 14.35 **Neoplastic co-option of cell and tissue plasticity in pancreatic tumorigenesis**  
Dr. Dìrena Alonso-Curbelo, IRB Barcelona (Barcelona, Spain)
- 15.10 **Evolutionary trajectories from premalignancy to cancer: lessons from the oesophagus**  
Dr. Rebecca C. Fitzgerald, University of Cambridge (Cambridge, UK)

15.45 - 16.15 *Coffee break and poster session*

- 16.15 **Life history of breast cancer and related clones**  
Dr. Seishi Ogawa, Kyoto University (Kyoto, Japan)
- 16.50 **Mutagenic exposures underlying cancer development**  
Dr. Mike Stratton, Wellcome Sanger Institute (Hinxton, UK)

17.25 *Panel Discussion/Colloquium*

18.00 *End of session*

## Tuesday, 28 November

### Session III: Cellular origins and hallmarks of neoplastic identity

9.00 **Altering chromatin accessibility - implications for development and tumorigenesis**  
Dr. Alexandra Avgustinova, IRB Barcelona/ Institut de Recerca Sant Joan de Déu (Barcelona, Spain)

9.35 **Stem cells, immune evasion and metastasis in colorectal cancer**  
Dr. Eduard Batlle, IRB Barcelona/ICREA (Barcelona, Spain)

10.10 -10.40 *Coffee break and poster session*

10:40 **Impact of aging on lung plasticity and tumorigenesis**  
Dr. Tuomas Tammela, Memorial Sloan Kettering Cancer Center (New York, NY, USA)

11.15 **Short talk 4: Development and cancer: regulatory elements in pancreatic cancer onset**  
Dr. Luis Arnes, University of Copenhagen (Copenhagen, Denmark)

11.30 **Short talk 5: Pdgfra-expressing stroma responds promptly to intestinal epithelial overgrowth**  
Dr. Elisa Manieri, Dana-Farber Cancer Institute (Boston, USA)

11.45 **EMT and cell plasticity trajectories in cancer progression**  
Dr. Ángela Nieto, Institute of Neurosciences of Alicante- UMH (Elche, Alicante)

12:20-13.20 *Lunch and poster session*

### Session IV: Crosstalk within normal and malignant ecosystems

13.20 **Resolving site-specific immune barriers to metastasis**  
Dr. Ana Luisa Correia, Champalimaud Foundation (Lisboa, Portugal)

13.55 **Single-cell spatial landscapes of the lung and brain tumour immune microenvironment**  
Dr. Logan Walsh, McGill University (Montreal, Quebec, Canada)

14.30 **Short talk 6: Spatial differences in the molecular organisation of tumours along the proximal-to-distal axis of the colon are linked to interactions within the tumour ecosystem**  
Dr. Martin H. Schaefer, European Institute of Oncology (Milano, Italy)

14.45 **Organoid cellular cancer immunity models in motion**  
Dr. Anne Rios, Princess Máxima Center for Pediatric Oncology (Utrecht, The Netherlands)

15.20- 16.00 *Coffee break and poster session*

16.00 **Malignant networks in brain tumors (and how to disconnect them)**  
Dr. Frank Winkler, DKFZ Heidelberg (Heidelberg, Germany)

16:35 **Short talk 7: An interactive cellular ecosystem blocks epithelial transformation in naked mole-rat**  
Dr. Mikaela Behm, DKFZ Heidelberg (Heidelberg, Germany)

16.50 **Select microbial responses by intestinal epithelial cells promotes repair and cancer**  
Dr. Gretchen Diehl, Memorial Sloan Kettering Cancer Center (New York, NY, USA)

17.25 **The power of ONE: Immunology in the age of single cell genomics**  
Dr. Ido Amit, Weizmann Institute of Science (Rehovot, Israel)

18.00 *End of session*

20.30 *Speakers dinner (Restaurant Can Pineda) (Sant Joan de Malta, 55)*

## Wednesday, 29 November

### Session V: Challenges and opportunities for clinical translation

9.00 **Genetic and non-genetic features of tumor immunity: mismatch repair deficiency as a model system**  
Dr. Luis Diaz, Memorial Sloan Kettering Cancer Center (New York, NY, USA)

9.35 **Short talk 8: Genome-wide CRISPR screens identify novel co-dependencies with KRAS inhibition**  
Bettina Sajtos, Research Institute of Molecular Pathology (Vienna, Austria)

9.50 **Short talk 9: Methylation of the epigenetic regulator KMT2D by SMYD2 contributes to therapeutic response in hormone-dependent breast cancer**  
Dr. Eneda Toska, Johns Hopkins University School of Medicine (Baltimore, Maryland, USA)

10.05 **Clonal selection in normal tissues and its relation to cancer risk**  
Dr. Núria López-Bigas, IRB Barcelona/ ICREA (Barcelona, Spain)

10.40 -11.20 *Coffee break and poster session*

11.20 **Exploring evolutionary contingencies and constraints by rewinding the tape of malignant transformation**  
Dr. Samra Turajlic, The Francis Crick Institute (London, UK)

- 11.55 **Short talk 10: Origin of second malignancies in pediatric patients**  
Dr. Mònica Sánchez-Guixé, IRB Barcelona (Barcelona, Spain)
- 12.10 **Short talk 11: Epithelioids: Self-sustaining long-term 3D cultures reveal drivers of clonal expansion in esophageal epithelium**  
Dr. Albert Herms, Universitat de Barcelona, Barcelona, Spain
- 12.25 **Genomic, host and microenvironmental determinants of cancer progression**  
Dr. Christina Curtis, Stanford University School of Medicine (Stanford, CA, USA)
- 13.00 *Concluding remarks and end of conference*