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  Modulation of 3D chromatin structures to support tumor evolution
Dr. Elisa Oricchio, EPFL (Lausanne, Switzerland)

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. Direna 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 tumourigenesis
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: Non-genetic routes of lung cancer evolution
Dr. Giovanni Ciriello, University of Lausanne (Lausanne, Switzerland)

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)

14.50- Coffee break and poster session

15.20- 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 Satjos, 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 Somatic mutations in tumors and normal tissues
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