

# Cancer Genomics, Multiomics and Computational Biology Programme

Bergamo, Italy

30 April - 2 May 2024



## Scientific Programme

Tuesday 30th April 2024

**Listed times are in Central European Summer Time (CEST)**

- 11:30 REGISTRATION & WELCOME LUNCH (LUNCH FROM 12:00)
- 13:00 CONFERENCE WELCOME
- SESSION 1: INTERSECTION OF FUNCTIONAL AND IMMUNOGENOMICS FOR THERAPY  
Chair: Carlos Caldas
- 13:10 OPENING KEYNOTE LECTURE  
**Julian Downward**  
Francis Crick Institute, UK  
"Investigating the interplay between oncogenic signaling and tumour immune evasion in lung cancer"  
Q&A: 13:40-13:55
- 13:55 **Elaine Mardis**  
Institute for Genomic Medicine, USA  
"Oncolytic Viral Therapy Immunogenomics in adult GBM"  
Q&A: 14:15-14:25
- 14:25 **Diego Chowell**  
Icahn School of Medicine at Mount Sinai, USA  
Proffered Paper 1: "An immunogenetic basis for lung cancer risk"  
Q&A: 14:35-14:40
- 14:40 EXHIBITOR INTRODUCTIONS
- 14:50 COFFEE BREAK & EXHIBITION  
Chair: James Brenton
- 15:20 **Elisa Oricchio**  
EPFL, Switzerland  
"Modulation of 3D chromatin structures to support tumor evolution"  
Q&A: 15:40-15:50
- 15:50 **Tancredi Massimo Pentimalli**  
Max Delbrück Center, Germany  
Proffered Paper 2: "Single cell-resolved multimodal atlas of a lung tumor in 3D"  
Q&A: 16:00-16:05
- 16:05 **Clare Puttick**  
Francis Crick Institute, UK

Proffered Paper 3: "HLA disruption through genetic and non-genetic mechanisms is pervasive in lung and breast tumours"

Q&A: 16:15-16:20

16:20 MOLECULAR ONCOLOGY: CALL FOR CONTENT

16:30 POSTER SPOTLIGHTS

16:40 INDUSTRY SYMPOSIUM - BIOMODAL

**Dr Jacob Househam**

The Institute of Cancer Research (ICR), UK

'Combined genetic and epigenetic analyses of a Lynch syndrome tumour'

17:10 NETWORKING QUIZ

Our fun, informal quiz offers conference participants the chance to make new connections on the first evening of the meeting.

17:40 WELCOME RECEPTION

18:20 POSTER DISCUSSION SESSION 1

## Wednesday 1st May 2024

**Listed times are in Central European Summer Time (CEST)**

08:15 EARLY POSTER VIEWING (WITH COFFEE & BISCUITS)

08:45 INDUSTRY SPOTLIGHT - LUNAPHORE TECHNOLOGIES

**Clément Chavelier (Lunaphore, Switzerland) and Euplio Visco (ACD, Italy)**

True spatial multiomics: when RNA meets protein on the same section

SESSION 2: SINGLE CELL CANCER DISSECTION

Chair: Núria López-Bigas

09:00 **Ido Amit**

Weizmann Institute of Science, Israel

"The power of ONE: Immunology in the age of single cell genomics"

Q&A: 09:20-09:30

09:30 **Carlos Caldas**

Cancer Research UK Cambridge Institute, UK

"Dissecting breast cancer ecosystems at single cell level"

Q&A: 09:50-10:00

10:00 **Efrat Shema**

Weizmann Institute, Israel

"Single-molecule and single-cell epigenetics: Decoding the epigenome for cancer research and diagnostics"

Q&A: 10:20-10:30

10:30 **Fernando Perez**

University of Helsinki, Finland

Proffered Paper 4: "Machine learning to reveal the specific cell-level spatial tumor microenvironment features across Ovarian Cancer clinico-molecular subtypes"

Q&A: 10:40-10:45

10:45 COFFEE BREAK & EXHIBITION

- 11:15 Yarden Samuels  
Weizmann Institute of Science, Israel  
"Revisiting the Neoantigen Approach for Cancer Immunotherapy"  
Q&A: 11:35-11:45
- 11:45 **Daria Romanovskaia**  
Center for Molecular Medicine, Austria  
Proffered Paper 5: "Plasticity and epigenetic regulation of Ewing sarcoma cell states"  
Q&A: 11:55-12:00
- 12:00 **Sahil Sahni**  
National Cancer Institute, USA  
Proffered Paper 6: "Deactivation of ligand-receptor interactions enhancing lymphocyte infiltration drives melanoma resistance to Immune Checkpoint Blockade"  
Q&A: 12:10-12:15
- 12:15 POSTER SPOTLIGHTS
- 12:30 LUNCH
- 13:30 POSTER DISCUSSION SESSION 2  
SESSION 3: BIOMARKERS FOR PRECISION ONCOLOGY  
Chair: Elaine Mardis
- 15:00 **Eytan Rupp**  
Center for Cancer Research, National Cancer Institute, USA  
"Next generation precision oncology: From omics to slides"  
Q&A: 15:20-15:30
- 15:30 **Shira Sagie**  
Weizmann Institute, Israel  
Proffered Paper 7: "KRAS G12V neoantigen-specific therapy modalities development and assessment"  
Q&A: 15:40-15:45
- 15:45 **Francisco Martinez-Jimenez**  
Vall d'Hebron Institute of Oncology (VHIO), Spain | Hartwig Medical Foundation, Netherlands  
"Unravelling the immunogenomic determinants of metastasis"  
Q&A: 16:05-16:15
- 16:15 COFFEE BREAK & EXHIBITION
- 16:45 **Trevor Pugh**  
Princess Margaret Hospital, OICR, Toronto, Canada  
"Early cancer surveillance through multi-modal analysis of cell-free DNA fragments in blood"  
Q&A: 17:05-17:15
- 17:15 **James Brenton**  
Cancer Research UK Cambridge Institute, UK  
"DNA damage response signatures as therapeutic predictors in recurrent drug-resistant ovarian cancer"

Q&A: 17:35-17:45

17:45 **MEET THE SCIENTIFIC PROGRAMME COMMITTEE**

The committee members will reflect on the conference so far before each providing insight into their personal and professional experiences of their routes into scientific leadership.

19:30 **CONFERENCE DINNER**

The Conference Dinner will be held at the atmospheric Ristorante Taverna Valtellinese, Optional ticketed event.

## Thursday 2nd May 2024

**Listed times are in Central European Summer Time (CEST)**

08:15 **EARLY POSTER VIEWING (WITH COFFEE & BISCUITS)**

08:45 **INDUSTRY SPOTLIGHT - NONACUS**

**Tim Gilbert**

Nonacus

'GALEAS: Precision bioinformatics for precision oncology - MSH2 to 1p19q'

**SESSION 4: SINGLE CELL CANCER ANALYTICS**

Chair: Yardena Samuels

09:00 **Bernd Bodenmiller**

University of Zurich, Switzerland

"Highly multiplexed imaging of in situ tumor ecosystems towards precision medicine"

Q&A: 09:20-09:30

09:30 **Asaf Madi**

Tel Aviv University, Israel

"Integration of single-cell RNAseq data and protein-protein interaction networks"

Q&A: 09:50-10:00

10:00 **Kevin Tu**

University of Cambridge, UK

Proffered Paper 8: "Characterizing the breast cancer microenvironment using different data modalities and clinical associations at cell-state granularity"

Q&A: 10:10-10:15

10:15 **COFFEE BREAK & EXHIBITION**

10:45 **Hannah Carter**

UC San Diego, USA

"Interface-guided phenotyping of coding variants in the transcription factor RUNX1"

Q&A: 11:05-11:15

11:15 **THE EMBO KEYNOTE LECTURE**

**Nuria Lopez-Bigas**

Institute for Research in Biomedicine, Spain

"Clonal selection in normal tissues and its relation to cancer risk"

Q&A: 11:45-12:00

12:00 SUMMARY & CLOSE

12:10 DEPART