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 & SOLO TRAVELLER MEET-UP

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 Delbruck 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 Household
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 Chavalier (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 specifc 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 Yardena 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

12:25 LUNCH

13:30 POSTER DISCUSSION SESSION 2

SESSION 3: BIOMARKERS FOR PRECISION ONCOLOGY
Chair: Elaine Mardis

15:00 **Eytan Ruppin**
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

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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