



Tumour Microenvironment Meeting & 3D Model Workshop

**6 - 8 September 2023
NTU Nottingham**

Organisers

3D Model Workshop

Anna Grabowska – University of Nottingham

Penny Ottewell – University of Sheffield

Beth Coyle – University of Nottingham

Paloma Ordonez Moran – University of Nottingham

Jennifer Ashworth – University of Nottingham

Tumour Microenvironment

Alan McIntyre – University of Nottingham

Sarah Storr- University of Nottingham

Andrew Benest – University of Nottingham

Abdol Shams-Nateri – University of Nottingham

Tim Ritzman – University of Nottingham

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Next-Generation Sequencing Solutions Enable Deeper Insights into the Tumor Microenvironment

Immuno-oncology (I/O) therapies are considered to be promising anti-cancer treatments and are generating hope and excitement among researchers, clinicians, and patients. The Ion Torrent portfolio of immuno-oncology next-generation sequencing (NGS) assays enables an innovative, multi-dimensional approach to understanding the tumor microenvironment. Each genomic assay uses the sensitivity of NGS to decipher the hidden biology within precious samples and can be implemented independently or together for a more holistic view to enhance clinical research study design and positively impact study outcomes.

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- TCR beta assays for deeper insights into clonality and convergence
- BCR IgH assays to quantify somatic hypermutations and study isotypes
- Immune response assay to monitor the tumor microenvironment
- Tumor mutation load assay for accurate quantification of TMB

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As part of their sponsorship the EACR are offering Congress registrations to award winners but understand that they may not be in a position to submit an abstract or have access to the required funding to attend an international congress. The choice of a €100 prize is therefore also available.

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PROGRAMME

6th Sept Day 1 3D Cancer Modelling Workshop

1000 Coffee and Registration

1030 Introduction and Welcome

Modelling stromal contribution in tumours

1035 **Giulia Biffi** (CRUK Cambridge Institute) - *Deconstructing Pancreatic Ductal Adenocarcinomas*

1105 Talk selected from abstracts: **Olivier Pardo** - *Crosstalk with lung fibroblasts shapes the growth and therapeutic response of mesothelioma cells*

1120 Talk selected from abstracts: **Rhianna Blyth** - *Development of a 3D in vitro Breast Cancer Organotypic Model of Obesity Associated Adipose Inflammation*

Innovative technologies for tumour modelling

1135 **Alvaro Mata** (University of Nottingham) - *Biomimetic materials for tumour tissue engineering*

1155 **Carlos Reyes** (City University of London) - *What do we mean by "Computational and Mathematical Modelling of the Tumour Microenvironment"?*

1220 **Amanda Wright** (University of Nottingham) - *OptoRheo: 3D light sheet imaging and micro-mechanical sensing of live 3D cell culture systems over long time courses.*

1245 Lunch and poster viewing

Modelling the Immune landscape in vitro

1415 Keynote - **Calvin Kuo** (Stanford University, School of Medicine, USA) - *Organoid Modeling of Tumor and Tissue Microenvironments*

1440 Talk selected from abstracts: **Eline Janssen** - *Co-evolution of macrophages and fibroblasts in an in vitro model of colorectal cancer*

1455 Talk selected from abstracts: **Keqian Nan** - *Development of an ex vivo Image-Based Artificial Intelligence platform for Kidney precision oncology*

1510 Talk selected from abstracts: **Vithurran Thavarajah** - *Keeping it together: Spatial transcriptomic validation of patient-derived whole prostate tumour explant culture against patient-matched primary specimens from the SCREEN cohort*

1525 Flash poster presentations

1615 Tea break

Translation to the clinic

1645 **Greg Wells** (University of Sheffield) – *Ex vivo screening in solid cancers: can we measure drug action at single cell resolution?*

1710 **Geoff Pilkington** (Chair of Animal Free Research UK) - *Advancement of sophisticated, dynamic human models of the brain tumour microenvironment for pre-clinical drug efficacy and delivery testing [NAMs]*

1735 Open floor discussion and closing remarks

1800 Drinks/nibbles and poster viewing

7th Sept Day 2 Tumour Microenvironment

Session 1

0900 Keynote: **Gabriele Bergers** (Dept of Oncology KU, Leuven Belgium) - *A vascular perspective to aid antitumor immunity in cancer*

Session 2: Vascular/Lymphatic – Tumour Interactions

0945 **Hellmut Augustin** (Heidelberg University, Germany) - *Vascular Control of Tumour Progression and Metastasis*

1015 **Jacqui Shields** (King College, London) - *Exploring the role of stroma as immune modulators in the extended Tumour Microenvironment*

1045 Refreshment Break

Session 3: Immune-Tumour Interactions

1115 **Stuart Hughes** (Pathios Therapeutics, Oxford) - *GPR65 is a key sensor of low pH in the tumour microenvironment (TME) that drives the immunosuppressive polarization and exclusion of multiple immune cell subsets.*

1145 **Sara Zanivan** (CRUK Beatson Institute) - *Harnessing CAF metabolism to create an anti-tumour stroma*

1215 Talk selected from abstracts: **Marc Rabionet Diaz** - *Development of in vitro and in vivo tools to investigate the effects of the microenvironment on antigen-specific T Cell activation.*

1230 Talk selected from abstracts: **Sophie de Carne** - *RAS oncogenic activity is associated with immune priming and escape in lung adenocarcinoma*

1245 Sponsored Workshop: **Aayush Sharma** (Thermo Fisher) - *Next-Generation Sequencing Solutions Enable Deeper Insights into the Tumor Microenvironment*

1245 Lunch and Posters

Session 4: Tumour-Host/Stromal Interactions

1400 **Claus Jorgensen** (CRUK Manchester Institute) - *Tumour-host interactions in the pancreatic cancer microenvironment*

1430 **Jim Norman** (CRUK Beatson Institute) - *Unexpected roles for the mRNA translation machinery in generating the ECM-rich microenvironments which foster initiation of hepatocellular carcinoma.*

1500 Talk selected from abstracts: **Constantinos Demetriou** - *Decoding Pancreatic Cancer's Tumour Microenvironment through Large-Scale Integration of Single-Cell RNA-Seq Datasets*

1515 Talk selected from abstracts: **Fátima de la Jara Ortiz** - *In vitro generation and characterization of distinct subtypes of cancer-associated fibroblasts*

1530 Refreshment break

Session 5: Metastasis

1600 **Janine Erler** (Biotech Research & Innovation Centre, Denmark) - *Modelling metastasis in native ECM organ scaffolds*

1630 **Samra Turajlic** (Francis Crick Institute) - *Tumour microenvironment conditions that support emergence of metastatic competence*

1700 Talk selected from abstracts: **Oscar Maiques Carlos** - *Extracellular matrix organisation at the invasive front of tumours generates a mechanical transcriptional memory in cancer cells during tumour dissemination*

1715 Talk selected from abstracts: **Mia Nuckhir** - *Investigating the role of the lung microenvironment in the regulation of breast cancer metastatic colonization*

1730 Networking time

1830 Drinks Reception in the Chemistry Theatre followed by the Conference Dinner

8th Sept Day 3 Tumour Microenvironment

0900 Keynote 2: **Peter Friedl** (MD Anderson Cancer Centre, USA), sponsored by the EACR - *Visualizing and modelling CTL - tumour cell interaction and additive Cytotoxicity*



Session 6: Imaging

0945 **Greg Hannon** (CRUK Cambridge Institute) - *Impacts of tumour heterogeneity on disease progression and response*

1015 **Mariam Eleni Oraiopoulou** (CRUK Cambridge Institute) - *Identifying vasulogenic mimicry and the effect of anti-vascular therapy with photoacoustics*

1030 Talk selected from abstracts: **Sarah Gosling** - *Prostate calcification as a marker of cancer: A multi-level X-ray analysis*

1045 Refreshment break

Session 7: Hypoxia

1115 **Sonia Rocha** (University of Liverpool) - *Hypoxia changes chromatin structure to allow for specific cellular responses*

1145 **Ester Hammond** (Oxford University) - *Targeting the biological response to hypoxia, exploiting weaknesses*

1215 Talk selected from abstracts: **Apple Tay** - *VHL restoration in clear cell renal cell carcinoma improves NK cell infiltration and function*

1230 Talk selected from abstracts: **Maria José Besso** - *Methylation/gene expression changes underlying the response Radio-chemotherapy with Nimorazole in head and neck carcinoma xenografts.*

1245 Lunch and posters

Session 8: Into the clinic and patient perspective

1400 **Simon Lord** (Oxford University) - *Repurposing metformin as cancer therapeutic*

1430 **John Anderson** (University College London) - *Engineered T cell approaches for children's solid cancers*

1500 Talk selected from abstracts 10: **Jiabao Zhou** - *Novel methods of targeting IL-1 signalling for the treatment of breast cancer bone metastasis*

1515 Invited Patient perspective talk
Patricia Fairbrother

1545-1600 Closing Remarks/Poster Prize and meeting end.

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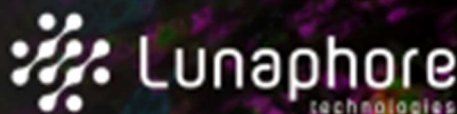
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