

08:15 - 09:00 Registration & coffee

09:00 - 09:05 Welcome by Martin Williams & Charlotte Scott

Plenary session 1 - AM

Chairs: Martin Williams & Christopher Glass

## ONTOGENY AND TRANSCRIPTIONAL CONTROL OF DCS AND MACS (I)

09:05 - 09:35 Development of functionally diverse dendritic cell subsets  
**Kenneth Murphy**, *Washington University School of Medicine St. Louis, US*

09:35 - 10:05 Exploiting dynamic enhancer landscapes to decode macrophage phenotypes in health and disease  
**Christopher Glass**, *University of California, San Diego, US*

10:05 - 10:20 *Selected talk: On how function determines form*  
Poster 256  
**Justin Perry**, *Memorial Sloan Kettering Cancer Center, US*

10:20 - 10:25 *Sponsored talk: Mapping the Future with Spatial Genomics*  
**Justin Cooper**, *Regional Account Manager, Vizgen, US*

10:25 - 11:05 Coffee break

11:05 - 11:35 *EMBO YIP Lecture: Functional specialization of short-lived monocyte-derived macrophages in human tonsils*  
**Elodie Segura**, *Curie Institute, FR*

11:35 - 12:05 Chromatin and the transcription factor IRF8 in the regulation of dendritic cell differentiation  
**Tomohiko Tamura**, *Yokohama City University, JP*

12:05 - 12:08 *Poster pitch: The UPR sensor IRE1 is a downstream regulator of apoptotic cell engulfment in dendritic cells*  
Poster 31  
**Victor Bosteels**, *VIB-UGent Center for Inflammation research BE & Ghent University, BE*

12:08 - 12:11 *Poster pitch: Developing in vitro and in silico Models of Human Dendritic Cell Biology*  
Poster 78  
**Zahra Elahi**, *The University of Melbourne, AU*

Plenary session 1 - AM

Chairs: Martin Williams & Christopher Glass

12:11 - 12:14 *Poster pitch: A distinct Csf1r- erythro-myeloid precursor present at the maternal-embryonic interface and in the bone marrow of adult mice*  
Poster 252  
**Rohit Jain**, *The University of Sydney, AU & Medical University of Vienna, AT*

12:14 - 12:17 *Poster pitch: A journey through time and space: Resolving tissue macrophage development with endogenous Polylox barcoding*  
Poster 90  
**Larissa Frank**, *German Cancer Research Center (DKFZ), DE*

12:17 - 12:20 *Poster pitch: TREM2 drives accumulation of profibrotic monocyte-derived macrophages in the infarcted myocardium*  
Poster 219  
**Clement Cochain**, *University Hospital Wuerzburg, DE*

12:20 - 13:20 Lunch

13:05 - 13:50 *Workshop - Vizgen: Mapping the Future with Single-Cell Spatial Genomics – An Introduction to MERSCOPE® (Room: Concert hall)*  
**Carole Chedid**, *Field Application Scientist, Vizgen, UK*

13:05 - 13:50 EMDS general assembly (Room: Anatomical Theatre)

13:20 - 14:20 Poster session 1: Odd numbers between 1-150

Plenary session 1 - PM

Chairs: Miriam Merad & Shalin Naik

## ONTOGENY AND TRANSCRIPTIONAL CONTROL OF DCs AND MACs (II)

- 14:20 - 14:50 Clonal multi-omics and machine learning resolve the transcriptional origins of clonal fate in human haematopoiesis  
**Shalin Naik**, WEHI, AU
- 14:50 - 15:20 Heterogeneity of Dendritic Cells: Lineages versus States  
**Florent Ginhoux**, Gustave Roussy Hospital, FR
- 15:20 - 15:35 *Selected talk: The Molecular Landscape of Triple-Negative Breast Cancer Sculptures Intratumoral Macrophage Origin and Function*  
*Poster 218*  
**Charlotte Rivas**, Baylor College of Medicine, US
- 15:35 - 15:40 *Sponsored talk: Providing tools for Macrophages and Dendritic cell research*  
**Scott Cribbes**, Market Development Leader Cell Counting and Image Cytometry- Rewity, UK
- 15:40 - 16:20 Coffee break

Plenary session 2 - PM

Chairs: Shalin Naik & Miriam Merad

## DC & MAC HETEROGENEITY (I)

- 16:20 - 16:50 Defining dendritic cells in their phagocytic state *in vivo*  
**Miriam Merad**, Icahn School of Medicine at Mount Sinai, US
- 16:50 - 17:20 The power of ONE: Immunology in the age of spatial and single cell genomics  
**Ido Amit**, Weizmann Institute of Science, IL
- 17:30 - 18:30 Guided tour to the city center
- 18:30 - 19:30 Reception @ Oude Vismijn

08:30 - 09:00 Coffee

Plenary session 2 - PM

Chairs: Charlotte Scott & Roxane Tussiwand

## DC & MAC HETEROGENEITY (II)

- 09:00 - 09:30 A transient and spatially-restricted subset of resident Kupffer Cells induced by lipid uptake.  
**Charlotte Scott**, VIB-UGent Center for Inflammation Research, BE
- 09:30 - 10:00 The thin line between plasmacytoid and conventional dendritic cells  
**Roxane Tussiwand**, National Institute of Dental and Craniofacial Research, US
- 10:00 - 10:15 *Selected talk: A distinct stimulatory cDC1 subpopulation amplifies CD8+ T cell responses in tumors for protective anti-cancer immunity*  
*Poster 173*  
**Jan P. Böttcher**, Technical University of Munich (TUM), DE
- 10:15 - 10:20 *Sponsored talk: Spatial cell characterization with automated cyclic staining technology using the MACSima system*  
**Veerle Lemmens**, Imaging Specialist Miltenyi Biotec, BE
- 10:20 - 11:00 Coffee break
- 11:00 - 11:30 Developing *in vivo* CRISPR screens and automated spatial analysis pipelines to study liver regeneration  
**Martin Guilliams**, VIB-UGent Center for Inflammation Research, BE
- 11:30 - 12:00 Dying parenchymal cells lead to bile acid retention in efferocytic macrophages and hence fuel cholangitis progression  
**Lidia Bosurgi**, University Medical Center Hamburg Eppendorf, DE & Bernard Noth Institute for Tropical Medicine, DE
- 12:00 - 12:15 *Selected talk: Convergent differentiation of monocytes in adult skin permits repair of the resident Langerhans cell network*  
*Poster 13*  
**Clare Bennett**, Cancer Institute / University College London, GB

Plenary session 2 - AM

Chairs: Charlotte Scott &amp; Roxane Tussiwand

## DC &amp; MAC HETEROGENEITY (II)

- 12:15 - 12:18** *Poster pitch:* Hepatic stellate cells drive differentiation of monocyte-derived macrophages to regulate liver fibrosis in NASH  
*Poster 57*  
**Sabine Daemen**, Washington University School of Medicine, US
- 12:18 - 12:21** *Poster pitch:* Tissue-level descriptors and determinants of homeostatic core functions of macrophages  
*Poster 257*  
**Stefan Uderhardt**, University Hospital Erlangen and Friedrich-Alexander-Universität Erlangen-Nürnberg, DE
- 12:21 - 12:24** *Poster pitch:* Histology of human macrophage niches  
*Poster 170*  
**Magdalena Matusiak**, Stanford University, US
- 12:24 - 12:27** *Poster pitch:* RORyt-expressing dendritic cell-like cells represent a unique population of antigen presenting cells  
*Poster 183*  
**Hamsa Narasimhan**, Institute for Cardiovascular Physiology and Pathophysiology, LMU, DE; Walter Brendel Centre, University Hospital, DE
- 12:27 - 12:30** *Poster pitch:* TGFβ signaling regulates pancreatic islet macrophages  
*Poster 123*  
**Aude Jalon**, INSERM U1151 Institut Necker Enfants Malades, FR
- 12:30 - 13:30** Lunch
- 13:15 - 14:00** *Workshop - Miltenyi Biotec:* MACS iQ View Software solutions for analyzing spatial biology data (Room: Concert hall)  
**Veerle Lemmens**, Imaging Specialist BeNeLux Miltenyi Biotec, BE
- 13:30 - 14:30** Poster session 2: Even numbers between 1-150

Plenary session 3 - PM

Chairs: Elvira Mass &amp; Paul Kubes

## MACS &amp; DCS IN INJURED TISSUE

- 14:30 - 15:00** Neuroimmune signalling determining synaptic fate in neurodegenerative diseases  
**Soyon Hong**, UK Dementia Research Institute at University College London, UK
- 15:00 - 15:30** Spatial localization of macrophages helps maintain homeostasis  
**Paul Kubes**, University of Calgary, CA
- 15:30 - 15:45** *Selected talk:* Single cell RNA sequencing reveals unique macrophage subsets and functions associated with slowly and rapidly progressing cystic disease  
*Poster 289*  
**Kurt Zimmerman**, University of Oklahoma Health Sciences Center, US
- 15:45 - 15:50** *Sponsored talk:* Sanofi as your research partner: kick-start your project  
**Annemarie van Nieuwenhuijze**, European Ecosystem & Scientific Relations Lead - Sanofi, BE
- 15:50 - 16:30** Coffee break
- 16:30 - 17:00** Effector response to necroptotic cell death: an ensemble of immune and stromal cells  
**Carla Rothlin**, Yale University, US
- 17:00 - 17:15** *Selected talk:* Gut Macrophages Modulate Brain Neuropathology in Parkinson's disease  
*Poster 66*  
**Sebastian De Schepper**, UK Dementia Research Institute, University College London, UK
- 17:15 - 17:45** *EMBO YIP Lecture:* Developmental programming of Kupffer cells by maternal obesity causes fatty liver disease in the offspring  
**Elvira Mass**, University of Bonn, DE
- 17:45 - 19:00** Poster session 3: Odd numbers between 151 - 291
- 19:30 - 22:00** Conference dinner

08:30 - 09:00 Coffee

Plenary session 4 - AM

Chairs: **Bart Lambrecht & Ana-Maria Lennon-Duménil**

## DCS &amp; MACS IN MUCOSAL TISSUES

- 09:00 - 09:30** Probing tissue macrophage and monocyte functions in health and disease  
**Steffen Jung**, Weizmann Institute of Science, IL
- 09:30 - 10:00** Learning from SPAM (specific depletion of alveolar macrophages)  
**Bart Lambrecht**, VIB-UGent Center for Inflammation Research, BE
- 10:00 - 10:15** *Selected talk:* Intestinal stroma guides monocyte differentiation to macrophages through GM-CSF  
*Poster 140*  
**Egle Kvedaraite**, Karolinska Institutet, SE; Karolinska University Hospital, SE
- 10:15 - 10:20** *Sponsored talk:* Single Cell, Spatial or In Situ: Why choose if you can have it all?  
**Koen De Gelas**, Science and Technology Advisor - 10X Genomics, BE
- 10:20 - 11:00** Coffee break
- 11:00 - 11:30** Cell-Shape Sensing in Dendritic Cells  
**Ana-Maria Lennon-Duménil**, Institut Curie, FR
- 11:30 - 12:00** Dynamics and behaviour of mucosal macrophages in health and disease  
**Calum Bain**, University of Edinburgh, UK
- 12:00 - 12:15** *Selected talk:* Elucidating Tissue-Niche Interactions That Sustain Intestinal Macrophages  
*Poster 185*  
**Louis Ngai**, University of Toronto, CA
- 12:15 - 12:18** *Poster pitch:* Functional duality of intestinal DC2 reveals the importance of context in balancing tissue immune responses  
*Poster 12*  
**Anna Andrusaite**, University of Glasgow, GB

Plenary session 4 - AM

Chairs: **Bart Lambrecht & Ana-Maria Lennon-Duménil**

- 12:18 - 12:21** *Poster pitch:* Time-, tissue- and treatment-associated heterogeneity in tumour-residing migratory dendritic cells (DCs)  
*Poster 144*  
**Colin Lee**, University of Cambridge, GB; Wellcome Sanger Institute, GB
- 12:21 - 12:24** *Poster pitch:* Nucleotide metabolism in cancer cells fuels a UDP-driven macrophage crosstalk promoting immunosuppression and immunotherapy resistance  
*Poster 235*  
**Tommaso Scolaro**, VIB-KU Leuven Center for Cancer Biology BE
- 12:24 - 12:27** *Poster pitch:* Environmentally induced lung-specific innate immune training is controlled by Apolipoprotein E and Dectin-1  
*Poster 251*  
**Hannah Theobald**, Quantitative Systems Biology, LIMES Institute, University of Bonn, DE
- 12:27 - 12:30** *Poster pitch:* Cell state transitions and dynamics in zebrafish heart regeneration  
*Poster 175*  
**Janita Mintcheva**, Max-Delbrück Centrum for Molecular Medicine, DE; Humboldt University of Berlin, DE
- 12:30 - 12:35** *Sponsored talk:* InvivoGen, Innovation within reach  
**Benjamin Rauwel**, Key Account Manager - InvivoGen, FR
- 12:35 - 13:30** Lunch
- 13:15 - 14:00** *Workshop - 10x Genomics:* Xenium in situ: See Biology at true resolution (Room: Concert hall)  
**Koen De Gelas**, Science and Technology Advisor, 10x Genomics, BE
- 13:30 - 14:30** Poster Session 4: Even numbers between 151 - 291

Plenary session 5 - PM

Chairs: Max Krummel &amp; Maria Casanova Acebes

## MACS & DCS IN CANCER

- 14:30 - 15:00** Dendritic cells in immunity to infection and cancer  
**Caetano Reis e Sousa**, *The Francis Crick Institute, UK*
- 15:00 - 15:30** *EMBO YIP Lecture: Harnessing Innate Immunity to Enable Cancer Control*  
**Hind Medyouf**, *Georg Spayer Haus, DE*
- 15:30 - 15:45** *Selected talk: Breast cancer remotely imposes a myeloid bias on hematopoietic stem cells by reprogramming the bone marrow niche*  
*Poster 93*  
**Julie Helft**, *Inserm - Institut Cochin, FR*
- 15:45 - 16:20** Coffee break
- 16:20 - 16:35** *Selected talk: Differential responses of mouse and human dendritic cells to melanoma targeted therapies*  
*Poster 163*  
**Zoe Magill**, *Biomedicine Discovery Institute, Monash University, AU*
- 16:35 - 17:05** Final straws for the M1/M2 paradigm and the value of understanding immune archetypes  
**Max Krummel**, *University of California San Francisco/ImmunoX, US*
- 17:05 - 17:35** Of myeloid cells in solid tumors: lessons learned from preclinical models to clinical settings and future targeting scenarios  
**Maria Casanova-Acebes**, *Centro Nacional de Investigaciones Oncológicas, ES*
- 17:35 - 17:50** EMDS award ceremony
- 17:50 - 18:00** Closing & poster prizes

## MAPPING THE FUTURE WITH SINGLE-CELL SPATIAL GENOMICS AN INTRODUCTION TO MERSCOPE®

The complexity of biological systems lies not only in cell type heterogeneity but also in their spatial organization within tissues and organs. While single-cell RNA sequencing helps deep dive into individual cell identities and functions, spatial transcriptomics offer a comprehensive view of gene expression patterns that preserves spatial relationships across cellular microenvironments – essential for understanding tissue function and pathology. In this workshop, we will introduce you to Vizgen's all-in-one in situ genomics platform MERSCOPE®, which enables the direct profiling of the spatial organization of intact tissue at subcellular resolution, with genomic-scale throughput. We will then demonstrate how the MERSCOPE® Visualizer software can be used to easily explore high-resolution images, visualise segmented cell boundaries, quantify thousands of detected transcripts, and smoothly integrate single-cell gene expression analysis results.

**Workshop presenter: Dr. Carole Chedid**, Field Application Scientist, Vizgen, BE

## MACS IQ VIEW SOFTWARE SOLUTIONS FOR ANALYZING SPATIAL BIOLOGY DATA

The field of spatial biology continues to grow. High-multiplex imaging generates big and complex datasets. There is a high need for user-friendly software solutions enabling researchers to get scientific results fast and easy. In this workshop a basic analysis workflow is demonstrated in the MACS iQ View software ranging from data visualisation and single-cell identification to cell gating and profiling. A basic analysis workflow is built enabling to obtain meaningful insights from complex spatial biology data.

**Workshop presenter: Veerle Lemmens** - Imaging Specialist Miltenyi Biotec, BE

## XENIUM IN SITU: SEE BIOLOGY AT TRUE RESOLUTION

Single cell RNA sequencing has revolutionized our understanding of complex biological systems. These insights are only made richer when combined with spatial information. High-plex in situ analysis provided by Xenium enables scientists to view their samples with subcellular resolution at a depth like never before, by profiling 100s-1,000s of targets in situ. This type of analysis enables researchers to locate and type cells within their biological context, address questions about cell-cell communication, cellular microenvironments, and identify rare cell infiltration. Xenium In Situ, provides another powerful tool that can be used alongside Chromium Single Cell and Visium Spatial. Please join us to learn about: The robust workflow and high throughput of Xenium, Validated analysis panels and/or custom content for any species, Additional capabilities such as isoform, gene fusion and SNP detection in situ and The interplay between Chromium Single Cell, Visium and Xenium in situ.

**Workshop presenter: Koen De Gelas** - Science & Technology Advisor - 10X Genomics, BE