

08:45 - 09:15 Registration & coffee

09:15 - 09:20 Welcome

## VISUALIZING THE PROCESSES OF LIFE

Chair: Chris Guerin

09:20 - 09:55 Visualizing Chromatin Organization with Super-Resolution Microscopy  
**Maria Aurelia Ricci**, *The Institute of Photonic Sciences, ES*

09:55 - 10:20 Deeper and with more Meaning: Microscopy at Leica Microsystems  
**Julian Burke**, *CSO Leica Microsystems Group, UK*

10:20 - 10:45 CODIM, a New Super Resolution Microscopy Module  
**Gabriel Sirat**, *CTO BioAxial, FR*

10:45 - 11:15 Coffee break

11:15 - 11:50 Protein turnover at synapses: Imaging a synapse-specific branch of autophagy that is defective in Parkinson's disease  
**Patrik Verstreken**, *VIB Center for the Biology of Disease, KU Leuven, BE*

11:50 - 11:55 Isolating single cells Punch by Punch  
Sponsor talk: **Arjan Tibbe**, *CEO VyCAP*

11:55 - 12:20 Advanced Microscopy Platforms as the Key to Solve Challenging Biological Applications  
**Pablo Hernandez-Varas**, *European Product Specialist, Nikon Instruments, NL*

12:30 - 13:30 Lunch

13:30 - 14:30 Poster session

## IPS, REPROGRAMMING AND ORGANOIDS

Chair: Geert Berx

09:20 - 09:55 Molecular Mechanisms for Assembling and Resolving Human Naive Pluripotency  
**Jacob Hanna**, *Weizmann Institute of Science, IL*

09:55 - 10:30 High-Efficiency Cellular Reprogramming with Microfluidics  
**Nicola Elvassore**, *University of Padova, IT*

10:30 - 10:55 Human organ-on-a-chip tissue models for predictive testing of therapeutic drugs  
**Jos Joore**, *CEO, Mimetas, NL*

10:45 - 11:15 Coffee break

11:15 - 11:50 Lgr5 Stem Cell Based Organoids in Human Disease  
**Hans Clevers**, *Hubrecht Institute, NL*

11:50 - 11:55 CRISPR/Cas9 gene-edited cell lines as valuable research tools  
Sponsor talk: **Thomas Moser**, *Vice President, Horizon Discovery*

11:55 - 12:30 Human Pluripotent Stem Cells in Understanding Genetic Cardiovascular Disease and Effects of Drugs  
**Christine L. Mummery**, *Leiden University Medical Center, NL*

12:30 - 13:30 Lunch

13:30 - 14:30 Poster session

Parallel Session PM1 Hall 5

## IMAGING AND MICROSCOPY TECHNOLOGIES

Chair: Sebastian Munck

- 14:30 - 15:05** Scalable High-Dimensional Phenotyping of Intact Biological Systems  
**Kwanghun Chung**, MIT, US
- 15:05 - 15:30** Airyscan goes Fast: an innovative confocal imaging technology allows high resolution, high speed and low noise - simultaneously  
**Uroš Kržič**, Senior Application Consultant, Carl Zeiss Microscopy, DE
- 15:30 - 15:55** Three-Dimensional Multicolor Super-Resolution Microscopy  
**Manasa Gudheti**, Applications Scientist, Bruker, US
- 16:00 - 16:30** Coffee break

Hall 3 Parallel session PM 2

## ENGINEERING CELLS TO TISSUES AND ORGANS

Chair: Mark Veugelers

- 14:30 - 15:05** Tissue matrix derived biomaterials: From high-through put screening tools to biomimetic organ replacements.  
**Sven Sommerfeld**, Johns Hopkins, US
- 15:05 - 15:30** 3D Bioprinting of Human Soft Tissues: A New Frontier in Patient-specific Tissue Engineering  
**Héctor Martínez**, CTO, Cellink, SE
- 15:30 - 15:55** Potential Impact of Combining Organ Equivalents using the Multi-Organ-Chip Technology  
**Juliane Hübner**, Program manager, TissUse, DE
- 16:00 - 16:30** Coffee break

Plenary session Hall 3

## ACADEMIC PLENARY SESSION

Chair: Halina Novak

- 16:30 - 17:05** Nanoscale Construction and Imaging with DNA  
**Peng Yin**, Wyss Institute at Harvard University, US
- 17:05 - 17:40** Imaging the 3D Bone Marrow to Dissect the HSC Niche  
**Paul Frenette**, Albert Einstein, College of Medicine, US
- 17:45 - 18:45** Reception

08:45 - 09:20 Welcome coffee

## CELL MANIPULATION TECHNOLOGIES

Chair: Mark Veugelers

- 09:20 - 09:55 Delivery of Ultra Large Sized Cargo into Mammalian Cells  
**Eric Pei Yu Chiou**, *UCLA, US*
- 09:55 - 10:20 Enabling Individual Identification of the Tumor Genome Through Rare Cell Isolation and Growth  
**Mark White**, *Director, BioFoundry Applications at Berkeley Lights Inc. US*
- 10:20 - 10:45 Multi-Protein Photopatterning for a Customized Control of the Cell Microenvironment  
**Luc Talini**, *CEO Alvéole, FR*
- 10:45 - 11:15 Coffee break
- 11:15 - 11:50 Controlling Subcellular Organization and Dynamics Using Chemogenetics and Optogenetics  
**Lukas Kapitein**, *Utrecht University, NL*
- 11:50 - 12:15 Reinventing the Micropipette  
**Michael Gabi**, *CTO Cytosurge, CH*
- 12:30 - 13:15 **Workshop:** Advanced bioreactor technologies for growing and monitoring novel cell lines: Fixed Bed Bioreactor for virus, CarT, Exosomes,...to Multi-Plate Bioreactor for expanding stem cells  
**Renaud Balsse**, *Bioreactor specialist, Pall Life Sciences*  
**Philip Mathuis**, *CEO, Ovizio Imaging Systems*
- 12:15 - 13:30 Lunch
- 13:30 - 14:30 Poster session

## DRUG DISCOVERY

Chair: Jérôme Van Biervliet

- 09:20 - 09:55 Sequential Drug Treatment as a Novel Strategy in The Treatment of Cancer  
**René Bernards**, *NKI, NL*
- 09:55 - 10:20 Human clinical trials in mice: Modeling inter-patient response heterogeneity in PDXs  
**Juliet Williams**, *Head of Oncology Pharmacology Novartis, US*
- 10:20 - 10:45 Tracking drug action in living cells by Chemoproteomics  
**Gerard Drewes**, *Head of Science, GSK Cellzome, DE*
- 10:45 - 11:15 Coffee break
- 11:15 - 11:40 Sense & Sensitivity – Leveraging Advances in HCS for Better Drug Discovery  
**Jürgen Müller**, *Senior R&D Director, Perkin-Elmer, EU*
- 11:40 - 11:45 Advanced bioreactor technology for optimized cell culture productivity with inline cell growth imaging  
Sponsor talk: **Renaud Balsse**, *Bioreactor specialist, Pall Life Sciences*
- 11:45 - 12:10 Application of high-content imaging to the development and validation of engineered cell models  
**Nick Dolman**, *Thermo Fisher, NL*
- 12:15 - 13:30 Lunch
- 13:30 - 14:30 Poster session

## IN VIVO MODELS & ASSAYS

Chair: Geert Berx

- 14:30 - 15:05** Intravital Imaging of Stem Cell and Cancer Cell Plasticity  
**Jacco van Rheenen**, *Hubrecht Institute, NL*
- 15:05 - 15:30** From syngeneic to humanized mouse models: addressing the needs for novel immunotherapies (efficacy evaluation and biomarker discovery)  
**Jean-François Mirjole**, *Technology Director Oncodesign, FR*
- 15:30 - 15:55** Rapid In Vivo Profiling  
**Daniel Ford**, *Head of Data and Algorithms, Vium, US*  
**Abe Couse**, *Head of Marketing, Vium, US*
- 16:00 - 16:30** Coffee break

## CYTOMETRY

Chair: Hamida Hammad

- 14:30 - 15:05** Identification of dendritic cell populations responsible for sensitization to inhaled allergens  
**Hamida Hammad**, *VIB Inflammation Research Center, UGent, BE*
- 15:05 - 15:30** Real-time Deformability Cytometry: On-the-fly Mechanical Phenotyping for Label free Cell Functional Assays  
**Oliver Otto**, *CEO Zellmechanik Dresden, DE*
- 15:30 - 15:55** Multispectral Imaging Flow Cytometry: Illuminating T-Cell – APC Interactions  
**Haley Pugsley**, *Senior Research Scientist at Amnis part of MilliporeSigma, US*
- 16:00 - 16:30** Coffee break

## ACADEMIC PLENARY SESSION

Chair: Mark Veugelers

- 16:30 - 17:05** Multiparametric single-cell technologies for characterization of human cancer specimens  
**Julia Kennedy Darling**, *Stanford University, US*
- 17:05 - 17:40** Cancer cell of origin and tumor heterogeneity  
**Cédric Blanpain**, *VIB Center for the Biology of Disease KU Leuven, BE*
- 17:40 - 17:50** Closing remarks