Goodbye Flat Biology: Advancing 3D-based Models for Cancer Biology and Drug Discovery Programme

Berlin, Germany
10 - 13 November 2019

Scientific Programme

Sunday 10th November 2019

15:30 REGISTRATION
Tea/coffee available

17:00 CONFERENCE WELCOME
Scientific Programme Committee

17:15 OPENING KEYNOTE LECTURE
Dave Mooney
Harvard University, USA
"Cells and viscoelasticity"

18:15 ICEBREAKER INTRODUCTIONS
An opportunity to make new connections over a drink.

19:00 WELCOME BUFFET & TRADE EXHIBITION
Meitner Hall & Goethe Hall

Monday 11th November 2019

08:30 POSTER VIEWING & TRADE
Tea/coffee available

09:00 SESSION 1: 3D MODELS AND DRUG DEVELOPMENT
Chair: Ellen Van Obberghen-Schilling

09:00 **Neil Carragher**
University of Edinburgh, UK
"Advancing phenotypic drug discovery strategies through new cell-based assay technologies"

09:30 **Henriette Lanz**
Mimetas, Netherlands
"Modelling the tumor microenvironment on-a-chip"

10:00 **Georgios Giamas**
University of Sussex, UK
Proffered Paper 1: "3D co-culture invasion screening identifies fibroblast-expressed PIK3C identifies as a novel therapeutic target for TNBC"

10:15 EXHIBITOR INTRODUCTIONS
Short intro pitches by each company

10:30 COFFEE BREAK & TRADE

11:00 **Kendelle Murphy**
Garvan Institute, Australia

Proffered Paper 2: "Personalised medicine approach in pancreatic cancer reveals fine-tuned stromal versus epithelial FAK manipulation to improve systematic response to Gemcitabine and Abraxane"

11:15 **Hugo Snippert**
UMC Utrecht, Netherlands
"Real-time quantification of cellular drug response in patient-derived tumor organoids reveals heterogeneity in space and time"

11:45 POSTER SPOTLIGHTS
Abstracts 1-3 will be presented in short 'flash talks' of 3 minutes each.

11:55 INDUSTRY SYMPOSIUM - GREINER BIO-ONE
Glauco R. Souza
Greiner Bio-One
"Magnetic 3D Cell Culture, 3D Cell Culture made as simple as 2D"

12:25 BUFFET LUNCH & TRADE

13:00 POSTER DISCUSSION SESSION 1
Posters 1-55 will be presented. Tea/coffee available.

14:30 SESSION 2: CELL ADHESION & MECHANOBIOLOGY
Chair: Cathrin Brisken

14:30 **Valerie Weaver**
UCSF, USA
"Deconstructing the third dimension"

15:00 **Sara Wickström**
University of Helsinki, Finland
"Regulation of stem cell fate by niche-derived signals and forces"

15:30 **Jessica Morgner**
NKI, Netherlands
Proffered Paper 3: "Lamb1Dendra2 – A new mouse model to study basement membrane dynamics in vivo"

15:45 **Viola Vogel**
ETH Zürich, Switzerland
"Unraveling the mechanobiology of extracellular matrix and of macrophages"

16:15 INDUSTRY SPOTLIGHT - QUANTUM DESIGN
Sumeer Dhar
Screen GP Europe
"Novel Optical Coherence Tomography (OCT) technology for non-invasive 3D ex vivo imaging"

16:30 TECHNOLOGIES FORUM
Sign-up required. Invited speakers will host tables, each covering a different topic.

Tuesday 12th November 2019

08:30 POSTER VIEWING & TRADE
Tea/coffee available

09:00 MEET THE EXPERT TALK
Neil Carragher
University of Edinburgh, UK

An interactive session where our expert will share from their personal and professional perspectives on oscillating between academia and industry.

09:30 SESSION 3: TUMOUR PROGRESSION AND MECHANISMS OF INVASION
Chair: Valerie Weaver

09:30 **Peter Friedl**
Radboud UMC, Netherlands
"3D models to understand tissue remodeling and anti-cancer therapy in bone"

10:00 **Cathrin Brisken**
EPFL, Switzerland
"Hormones and breast cancer: how models matter"

10:30 COFFEE BREAK & TRADE

11:00 **Olivier De Wever**
Ghent University, Belgium
Proffered Paper 4: "Tumor engineered scaffolds to model peritoneal metastasis of serous ovarian carcinoma"

11:15 **Tariq Haddad**
Radboud UMC, Netherlands
Proffered Paper 5: "A Colorectal Carcinoma in 3D: Merging Knife-Edge Scanning Microscopy and Deep Learning"

11:30 **Ellen Van Obberghen-Schilling**
Institut de Biologie Valrose, France
"Shaping tumors and their microenvironment"

12:00 POSTER SPOTLIGHTS
Abstracts 56-58 will be presented in short 'flash talks' of 3 minutes each.

12:10 INDUSTRY SYMPOSIUM - NEXCELOM
Gillian Farnie
NDORMS, UK
"Breast Cancer Stem Cells – utilising in vitro assays to explore targets of tumour initiating cells"

12:40 BUFFET LUNCH & TRADE

13:15 POSTER DISCUSSION SESSION 2
Posters 56-111 will be presented. Tea/coffee available.

14:45 SESSION 4: REGULATING AND REMODELING THE IMMUNE MICROENVIRONMENT
Chair: Peter Friedl

14:45 KEYNOTE LECTURE
Melody Swartz
The University of Chicago, USA
"Modeling the tumor-immune microenvironment in vitro"

15:30 **Eduard Batlle**
IRB Barcelona, Spain
"Immune evasion and metastasis in colorectal cancer"

16:00 COFFEE BREAK & TRADE

16:30 **Mikala Egeblad**
Cold Spring Harbor Laboratory, USA
"Control of metastatic seeding and colonization by the microenvironment"

17:00 CONFERENCE DEBATE

Sara Wickström (for) and Senthil Muthuswamy (against)

"Smart 2D will be the new 3D" Invited speakers will discuss one of the key topics of the field. Participants will have a chance to vote on the debate, and to contribute to the conversation.

18:00 FREE TIME

Conference Dinner ticket holders not staying at Harnack House are welcome to relax in the Planck Lobby. Drinks may be purchased from Reception

19:30 CONFERENCE DINNER

Optional ticketed dinner

Wednesday 13th November 2019

08:30 POSTER VIEWING & TRADE

Tea/coffee available

09:00 SESSION 5: MULTIPLEX IMAGING OF CELLS

Chair: Neil Carragher

09:00 **Emmanuel Donnadieu**

Institut Cochin, France

"Dynamic imaging of T cell antitumoral activities in human tumor biopsies"

09:30 **Christian Conrad**

Berlin Institute of Health, Germany

"Spheroid imaging and sequencing"

10:00 INDUSTRY SYMPOSIUM - 10X GENOMICS

Marlon Stoeckius

10x Genomics

"A Multidimensional View of Biology using 10x Visium Spatial Gene Expression Solution"

10:30 COFFEE BREAK & TRADE CLOSES

11:00 **Maria Alieva**

Prinses Maxima Centrum, Netherlands

Proffered Paper 6: "3D imaging and multivariate dynamics analysis reveal behavioral signatures that enable engineered T cells to target breast cancer organoids"

11:15 **David Bryant**

Beatson Institute, UK

"Finding the order in chaos: understanding the heterogeneity of tumour cell invasion mechanisms"

11:45 CLOSING KEYNOTE LECTURE

Senthil Muthuswamy

Harvard Medical School, USA

"From a road less traveled to a worn path: 3D culture and organoids for cancer biology and therapeutics"

12:30 SUMMARY & AWARDS

12:45 LUNCH & DEPART