

# Imaging for Life. From Molecules to Diagnostics and Therapy

International Workshop, 8th and 9th November 2016  
CosmoCaixa Barcelona. c/ Isaac Newton, 26. Barcelona



International Center  
for Scientific Debate  
BARCELONA

Website : <<http://www.bdebate.org/en/forum/imaging-life-molecules-diagnostics-and-therapy>>

Register now : at <<https://en.xing-events.com/BD-Imaging-Life.html>>

Scientific leaders

**Francesc Xavier Avilés & Boris Turk**

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and Ljubljana Jozef Stefan Institute (& University of Ljubljana), Slovenia

## Tuesday, 8th November, 2016

9:15 **Welcome**

9:25 **SESSION 1: State of the Art in in-vivo Imaging, Approaches and Challenges**

9:30 **Functional and structural connectivity of the normal and diseased mouse brain**

Markus Rudin (ETH & University of Zurich, Switzerland)

10:00 **Imaging Biologics & Biologics for Imaging**

Rainer Kneuer (NOVARTIS, Basel, Switzerland)

10:30 **Coffee break**

11:00 **Well-defined polypeptide-based architectures: applications in drug delivery and molecular imaging** María J. Vicent (CIPF, Valencia)

11:30 **MALDI mass spectrometry imaging – latest advances and current potential**

Arndt Asperger (Bruker Daltonik, Bremen, Germany)

12:00 **OPTiSPIM: Getting the best of both worlds**

James Sharpe (CRG-PRBB, Barcelona)

12:30 **Lunch**

14:00 **SESSION 2: Subcellular, Cellular and Small Animal Imaging**

14:00 **Nanoscale imaging and spectroscopy of living cell membranes using single molecule optical nanotools**

María F. García-Parajo (ICFO, Barcelona)

14:30 **Assessing tumoral microenvironment: hypoxia with F18-MISO PET-CT in Cancer Research**

Francisca Mulero (CNIO, Madrid)

15:00 **Molecular Imaging in Drug Development**

Oliver Plettenburg (Institute of Medicinal Chemistry at HelmholtzZentrum, Munich, Germany)

15:30 **Coffee break**

16:00 **Imaging Model Diseases in Transparent Organs**

Julien Colombelli (IRB-PCB, Barcelona)

16:30 **New bioluminescent models to target cancer stem cells with nanomedicine**

Simó Schwartz (Hospital Vall d'Hebron, Institut de Recerca -VHIR-, Barcelona)

17:00 **Open debate on Sessions 1-2**

## Wednesday, 9th November, 2016

### 9:25 **SESSION 3: Combining Different Imaging Approaches**

Sensitivity, resolution and long-term biodistribution studies by H and C digital

9:30 **autoradiography : moving from 2D to 3D imaging**

Vincent Dive (CEA-Saclay, France)

10:00 **PET in drug discovery and development: an overview**

J. Raul Herance (Vall d'Hebron Institut de Recerca -VHIR-, Barcelona)

10:30 **Coffee break**

11:00 **Multimodality Imaging - The Ideal Solution to Advance Molecular Imaging?**

Tim Wokrina (Bruker BioSpin, Ettlingen, Germany)

**Unraveling therapy response in preclinical glioblastoma using MRSI-based molecular imaging and source analysis**

11:30

Ana Paula Candiota (CIBER / Dept. Bioquímica i Biologia Molecular, UAB, Barcelona)

12:30 **Lunch**

### 14:00 **SESSION 4: Towards Translational Imaging and Theranostics**

Small molecule protease probes for imaging cancer and infectious diseases

14:00

Matthew Bogyo (University of Stanford, USA)

**Optical Tomography and Its Role in Multimodality Imaging**

14:30

Kevin P. Francis (Perkin Elmer, USA)

**Precision Markers for Color-Coded Surgery - Imaging tumors and nerves**

15:00

Quyên T. Nguyen (University of San Diego, USA)

15:30 **Coffee break**

**Imaging targeted drug delivery in colorectal cancer models**

16:00

Ramon Mangues (Hospital de Sant Pau, Institut d'Investigacions Biomèdiques, Barcelona)

**Cysteine cathepsins as targets for noninvasive whole body imaging and targeted drug delivery**

16:30

Boris Turk (Jozef Stefan Institute, Ljubljana)

17:00 **Open debate on Sessions 3-4 and general discussion**

18:15 **Concluding remarks and closing of the meeting**

**Session Chairmen:** Drs. Markus Rudin (ETH-Zürich, CH), Maria F. García-Parajo (ICFO-Barcelona), Matt Bogyo (Univ. Stanford, US), Anna M. Planas (IIBB.IDIBAPS-Barcelona), Manel Sabés (Alba Synchrotron-Cerdanyola & UAB) and Carles Arús (UAB, Bellaterra).

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