

Program

Tuesday, September 10th

13h00. Welcoming

Session 1. Advances in In vivo microscopy: photoacoustic, intra-vital microscopy, wave-front shaping.

14h. **Title.** Thomas Chaigne (Institut Fresnel, Marseille, France)

14h50. **Title.** Willy Supatto (Laboratoire d'optique et biosciences, Ecole Polytechnique, Paris, France)

15h40. **Title.** Irène Wang (LIPhy, Grenoble).

16h05. Intravital Microscopy for Optimized Cell Therapy. **Boudewijn Van Der Sanden** (TIMC, Grenoble).

16h30. Coffee break

16h45. Imaging cell biology in cells' habitat: a tale of multiphoton. **Nicolas Melis** (IRMETIST, Poitiers).

17h10. **Title.** **Romina Macco** (Brucker).

17h35. Imaging the spatial distribution of the novel Treg subset DP8 α in the context of a novel cell-based immunotherapy approach for patients with Inflammatory Bowel Disease. **Caroline Vignes** (Nantes).

18h00. Keynote lecture: Title. **Prof. Ricardo Henriques** (Instituto Gulbenkian de Ciência, Oeiras, Portugal).

19h00. Dinner on site

20h30. Social event at EVE (bar associatif étudiant; <https://www.eve-grenoble.fr>)

Wednesday, September 11th

Session 2. Probes, biosensors and optogenetics: from design to functional in vivo experiments

8h. **Title.** Mélody Atkins (Institut la vision, Paris).

8h50. Title. **Morgane Rosendale** (IINS, Bordeaux).

9h40. Luminescent lanthanide complexes as probes for cellular imaging. **Olivier Sénèque** (LCBM, Grenoble).

10h05. The complex photophysics of photoconvertible fluorescent proteins under 405-nm illumination. **Jip Wulfjele** (IBS, Grenoble).

10h30. Coffee break

10h50. Abberior STED and MINFLUX: Super-resolution improves in all directions. **Frédéric Eghiaian** (Abberior Instruments).

11h00. Single-molecule-localization-microscopy (SMLM) at cryogenic temperatures offers new opportunities for nanoscale investigations of intact biological samples and cryo-correlative studies. **Virgile Adam** (IBS, Grenoble)

11h25. Decoding day-long maturation of PCFPs of the EosFP family allowed engineering fast-maturing variants. **Arijit Maity** (IBS, Grenoble).

11h50. Title. **Prénom Croque** (Oxxius).

12h00. Lunch time + Posters

Session 3. From mechanobiology to organoids

14h00. Title. Thomas Boudou (LiPhy, Grenoble, France)

14h50. Title. Caterina Tomba (INL, Lyon, France)

15h40. 3D single-molecule super-resolution imaging of microfabricated fractal substrates for cell culture and self-referenced imaging. **Clément Gabriel** (ESPCI, Paris).

16h05. Bioengineering Cell Quadruplets to Study Cell Intercalation. **Daniel Selma** (LIPhy, Grenoble).

16h30. Title. **Clément Laigle** (Leica).

16h40. Coffee break

17h10. 3D quantitative analysis of gastruloid symmetry breaking. **Alice Gros** (IBDM, Marseille).

17h35. Tools for exploration and quantitative analysis of cellular dynamics in mouse embryonic organoids. **Jules Vanaret** (IBDM, Marseille).

17h50. **Title.** **Elise Bertrand** (Zeiss).

19h00. Social event: dinner at “Clos des Marronniers”, 44 avenue Ambroise Croizat, Saint-Martin-d’Hères

Thursday, September 12th

Session 4. Diffusion at multiple scales: from measure to models

8h00. **Title. Olivier Ali** (ENS, Lyon, France)

8h50. Mechanics and Kinetics of HIV-1 Gag Self Assembly in T cells : Insights from single to few molecules' dynamics. **Cyril Favard** (IRIM, Montpellier, France)

9h40. Single Molecule Imaging Simulations with Advanced Fluorophore Photophysics. **Dominique Bourgeois** (IBS, Grenoble).

10h05. Pixel-by-pixel FLIM statistic to quantify FRET biosensors: how to achieve sensitive analysis. **Marc Tramier** (IGDR, Rennes)

10h30. Coffee break

10h45. TCR stimulation induces global nanoscale remodeling of the plasma membrane to promote signaling reactions. **Yannick Hamon** (CIML, Marseille).

11h10. Cellular distribution of the human NTH1 DNA glycosylase by confocal and super-resolution microscopy. **Lianne Rao** (IBS, Grenoble)

11h35. Label-free imaging of 3D cellular assemblies using confocal quantitative phase microscopy. **Duc-Minh Ta** (XLIM, Limoges).

12h00. Lunch time + Posters

14h00. Round tables

Round table 1: Molecular dynamics

Round table 2: In vivo Imaging

End of conferences

Thursday, September 12th

16h00. **Workshops: 1st round**

19h00. Dinner for workshop attendees

Friday, September 13th

8h30. **Workshops: 2nd round**

10h30. **Workshops: 3rd round**

End of Rencontres du GDR IMABIO