

## Les Avancées Scientifiques de la Recherche Biomédicale Toulousaine

**4-5 novembre 2024**

Centre de Biologie Intégrative de Toulouse, *Amphi Nicole Le Douarin*



**Inscription gratuite mais obligatoire avant le 23 octobre 2024 :**

<https://bio-sante-toulouse.fr/journees-scientifiques-de-la-sfr-b2s>



**Centre de Biologie Intégrative**

Campus de l'Université Toulouse III - Paul Sabatier, 169 rue Marianne Grunberg-Manago, 31400 Toulouse

# Lundi 4 novembre

9:00 – 9:15 : Mot de bienvenue de Fabienne Pituello, et Introduction Abdel Saoudi, *Directeur de la SFR-B2S*

9:15 – 10:15 : Session 1: **Chairs: Lilian Basso & Eloise Dufourd**

- **Mariette Ducatez** - *IHAP* - Influenza D virus in Europe
- **Albertus Viljoen** – *IPBS* - Nanoscale clustering of mycobacterial ligands and DC-SIGN host receptors are key determinants for pathogen recognition
- **Ludovic Martinet** – *CRCT* - TCR-independent CD137 (4-1BB) signaling promotes CD8+-exhausted T cell proliferation and terminal differentiation.
- **Laurence Vaysse** – *Restore*- Scalable Generation of Pre-Vascularized and Functional Human Beige Adipose Organoids

**10:15 – 10:45 - Pause café**

**10:45 – 11:45 : JEAN-PHILIPPE GIRARD**

Directeur de Recherche Inserm et responsable de l'équipe 'Biologie Vasculaire: Cellules endothéliales dans l'Immunité, l'Inflammation et le Cancer' à l'IPBS-Toulouse

« Discovery of IL-33, a major therapeutic target for asthma and COPD »

**Chair: Isabelle Saves**

11:45 – 12:30 : Session 2: **Chairs: Roxana Khazen & Bineta Rigaud**

- **Anne Dejean** – *Infinity* - Eomes-dependent mitochondrial regulation promotes survival of pathogenic CD4+ T cells during inflammation.
- **Fernando Muzzopappa** – *CBI* - Detecting and quantifying liquid-liquid phase separation in living cells by model-free calibrated half-bleaching.
- **Anaïs Briot** – *I2MC* - Endothelial DLL4 Is an Adipose Depot-Specific Fasting Sensor Regulating Fatty Acid Fluxes

**12:30 – 14:30 - Buffet déjeunatoire**

14:30 – 14:45: Session 3: **Ma thèse en 180 secondes : Wendy Le Mouëllic, IPBS-Toulouse**

**Lauréate nationale 2024**

« Caractérisation des voies d'acquisition du soufre et de la biosynthèse de cystéine de *Mycobacterium tuberculosis* pendant l'infection »

14:45 – 15:30 : Session 4: **Chairs: Anna Mattout & Doc & Laure Guitton-Sert**

- **Rémi Mascarau** – *IPBS* - Productive HIV-1 infection of tissue macrophages by fusion with infected CD4+ T cells
- **Chrystelle Bonnart** – *IRSD* - Chymotrypsin activity signals to intestinal epithelium by protease-activated receptor-dependent mechanisms.
- **Julie Klein** – *I2MC* - Calprotectin is a contributor to and potential therapeutic target for vascular calcification in chronic kidney disease.

**15:30 – 16:00- Pause café**

16:00 – 17:00 : Session 5: **Chairs: Laure David & Louise Battut**

- **Rémy Betous** – *INTHERES* - Filarial DAF-12 sense the host serum to resume iL3 development during infection.
- **Céline El Samrout** – *Infinity* - Landscape of mast cell populations across organs in mice and humans
- **Laura Lauture** – *CRCT* - C/EBP $\alpha$  Confers Dependence to Fatty Acid Anabolic Pathways and Vulnerability to Lipid Oxidative Stress-Induced Ferroptosis in FLT3-Mutant Leukemia
- **Tatianna Merle** – *CBI*- DISSECT is a tool to segment and explore cell and tissue mechanics in highly deformed 3D epithelia.

9:00 – 9:15 : **Pierre-Emmanuel Gleizes** – Directeur de *Génotoul*

9:15 – 10:15 : Session 6: **Chairs: Damien Ramel & Honora Labrana**

- **Sébastien Britton**– *IPBS* - Structural and functional basis of inositol hexaphosphate stimulation of NHEJ through stabilization of Ku-XLF interaction.
- **Camille Chagneau** – *IRSD* - HlyF, an underestimated virulence factor of uropathogenic *Escherichia coli*
- **Loïc Dupré** – *Infinity* - LFA-1 nanoclusters integrate TCR stimulation strength to tune T-cell cytotoxic activity.
- **Anthony Lemarié** – *CRCT*- *The STEMRI trial: Magnetic resonance spectroscopy imaging can define tumor areas enriched in glioblastoma stem-like cells.*

**10:15 – 10:45 - Pause café**

**10:45 – 11:45 : MAEL LEMOINE**

Professor of philosophy of medical science, ImmunoConcept

Team, University of Bordeaux

**Chair: Garance Castino**

11:45– 12:30 : Session 7: **Chairs: Gabrielle Potocki-Veronese & Sophie Lajus**

- **Emmanuel Doumard**– *Restore* - Explainable machine learning framework to predict personalized physiological aging.
- **Léon Kautz**– *IRSD* - The Hepatokine Fgl1 Regulates Hepcidin and Iron Metabolism During Anemia in Mice by Antagonizing Bmp Signaling
- **Muriel Mercier-Bonin** – *Toxalim* - Microplastics: What happens in the human digestive tract? First evidences in adults using in vitro gut models.

**12:30 – 14:30- Buffet déjeuner**

14:30 – 15:30 : Session 8: **Chairs: Matteo Serino & Jean Personnaz**

- **Sophie Barbe** – *TBI* – Computational Design of miniprotein binders.
- **Coralie Fontaine** – *I2MC* - The different natural estrogens promote endothelial healing through distinct cell targets.
- **Calum Johnston** – *CBI* - The RecA-directed recombination pathway of natural transformation initiates at chromosomal replication forks in the pneumococcus
- **Bruno Lamas**– *Toxalim* - Evaluating the Effects of Chronic Oral Exposure to the Food Additive Silicon Dioxide on Oral Tolerance Induction and Food Sensitivities in Mice.

**15:30– 16:00 - Pause café**

16:00 – 17:00 : Session 9: **Chairs: Sophie Yvon & Yann Malaisé**

- **Christel Devaud** – *CRCT* - Distant antimetastatic effect of enterotropic colon cancer-derived  $\alpha 4\beta 7$ +CD8+ T cells
- **Ines Osma- Garcia** – *Infinity* - The RNA binding proteins TIA1 and TIAL1 promote Mcl1 mRNA translation to protect germinal center responses from apoptosis
- **Lionel Mouledous** – *CBI* - Targeting Nociceptin/Orphanin FQ receptor to rescue cognitive symptoms in a mouse neuroendocrine model of chronic stress.
- **Miriam Pinilla** – *IPBS*- EEF2-inactivating toxins engage the NLRP1 inflammasome and promote epithelial barrier disruption

**17:00: conclusion Isabelle Saves ou Abdel Saoudi**