

18th GERLI LIPIDOMICS MEETING

Paris, october 16-18, 2023



FINAL PROGRAM

MONDAY, OCTOBER 16, 2023

9:00 Welcome coffee

9:45 Session 1 : Keynote lecture

Chair person: **Abdou Rachid Thiam & Hubert Schaller (GERLI president)**

10:00 **Robert V. Farese, Jr.** (Keynote speaker, New York, USA): *The phase of fat: mechanisms and physiology of lipid storage*

11:00 GERLI PhD Award: **Romain Magny** (Paris, France): *Investigating markers of pathophysiological processes of dry eye disease through lipidomic approaches*

11:15 GERLI-SFN and SFEL PhD Awards: **Jeanne Kergomard** (Rennes, France): *Enzymatic activity on plant lipids: combination of interfacial measurements at the molecular scale (nm) and kinetic measurements of degradation at the object scale (µm)*

11:30 Posters "flash presentations" (chair person: **Gerard Lambeau**)

12:15 Lunch Buffet and Posters



14:00 Session 2: Lipid trafficking at contact sites

Chair persons : **Isabelle Dugail & Adrian Troncoso-Ponce**

- 14:00 Francesca Giordano** (Invited speaker, Gif s/ Yvette, France): *Ménage à trois: role of endoplasmic reticulum-mitochondria contact sites in lipid droplet biogenesis*
- 14:30 Claudia Matthaeus** (Postdam, Germany): *Novel insights in caveolae mediated lipid trafficking*
- 14:45 Heitor Gobbi Sebinelli** (Gif-sur-Yvette, France): *What roles can the yeast tether Ist2 play at ER-PM contact sites?*
- 15:00 Fabien Alpy** (Invited speaker, Strasbourg, France): *The MOSPD2 protein connects the Endoplasmic Reticulum to other organelles (endosomes, mitochondria...) ... and to Lipid Droplets*
- 15:30 Alicia Damm** (Paris, France): *"Should I stay or should I go": protein relocation from ER-to-Lipid Droplets*
- 15:45 Francisco Sarmiento Mesquita** (Invited speaker, EPFL, Lausanne, Switzerland): *Why Lipids and Lipid Modifications are central for the biology of Coronaviruses?*
- 16:15 Coffee break and posters**

16:45 Session 3: Lipids in diseases

Chair persons : **Gérard Lambeau & Lhousseine Touqui**

- 16:45 Chetan Chitnis** (Invited speaker, Paris, France): *Targeting a host phospholipase A2 to develop a drug for malaria*
- 17:15 Maria Moriel-Carretero** (Montpellier, France): *The sterol / PI(4)P exchange at the heart of the increased susceptibility of cancer patients under chemotherapy to fatal SARS-CoV-2 infection*
- 17:30 Lea Loisay** (Lausanne, Switzerland): *Bone marrow lipids: The Good, the Bad, and the Ugly in Osteoarthritis*
- 17:45 Thierry Durand** (Montpellier, France): *Oxidized DHA and AdA to Dihomo-Isoprostanes and Neuroprostanes, Biomarkers and Bioactive Oxylipins*
- 18:00 Charlotte Gehin** (Lausanne, Switzerland): *CERT1 mutations perturb human development by disrupting sphingolipid homeostasis*
- 18:15 Lena Clausmeyer** (Osnabrück Germany): *In vitro characterization of the ceramide synthase in S. cerevisiae*
- 18:30 End of day 1, dinner on your own**



TUESDAY, OCTOBER 17, 2023

9:00 Session 4: Cancer and Metabolic diseases

Chair persons : **Frédéric Carriere & Ez-Zoubir Amri**

- 9:00 James Olzmann** (Invited speaker, Berkeley, USA): *Mechanisms of lipid quality control and ferroptosis*
- 9:30 Logan Leak** (Stanford, USA): *Palmitate as a central node in a novel non-apoptotic cancer cell death mechanism*
- 9:45 Perrine Vermond** (Louvain-la-Neuve, Belgium): *Phospholipase PLA2G7 is complementary to GPX4 in mitigating punicic acid-induced ferroptosis in prostate cancer cells*
- 10:00 Joel Haas** (Invited speaker, Lille, France): *Development of Hepatic Inflammation in NAFLD*
- 10:30 Youenn Launay** (Rennes, France): *Decrypting the mechanisms involved in hepatic steatosis induced by an excess of dietary linoleic acid*
- 10:45 Gwendolyn Barceló-Coblijn** (Balearic Islands, Spain): *Visceral adipose tissue in the colon cancer microenvironment: a multi-omic approach*
- 11:00 Coffee Break and posters**
- 11:30 Marc Poirot** (Invited speaker, Toulouse, France): *The biological importance of the C5-C6 double bond of cholesterol*
- 12:00 Jeroen Guns** (Diepenbeek, Belgium): *Extracellular vesicle-associated cholesterol dictates the regenerative functions of macrophages in the brain*
- 12:15 John Yu** (Taoyuan, Taiwan): *Dysregulated Fatty Acid Metabolism Drives Cardiomyocyte Remodeling in Arrhythmogenic Cardiomyopathy*
- 12:30** Presentation by sponsor **Proteigene/Biocrates**: Carlos Malpica & Benoit Sarazin
- 12:40 Lunch Buffet and Posters**



14:00 Session 5: Chemical biology and analysis

Chair persons: **Benoit Colsch & Nicolas Vitale**

- 14:00 Maria Fedorova** (Invited speaker, Dresden, Germany): *Cellular lipidome plasticity in stress responses*
- 14:30 Brian Kleiboeker** (St. Louis USA): *Shotgun Lipidomic Assignment Tool (SLAT) Processing high resolution mass spectrometric data for rapid identification of lipid structures in mixture by elemental composition database searching*
- 14:45 Jeremy Baskin** (Invited speaker, New York, USA): *Imaging and Editing the Lipidome*
- 15:15 Alexander Wolf** (Strasbourg France): *Chemically modified lipids to explore differential roles of various phosphatidic acid species in neurosecretion*
- 15:30 Andrey Klymchenko** (Invited speaker, Strasbourg, France): *Fluorescent tools to shed light on lipids in plasma membranes and organelles*
- 16:00 Chems Amari** (Paris, France): *Control of lipid droplet dynamics in cells using engineered compartments*
- 16:15 Bruce Shilito** (Invited speaker, Paris, France): *Lipidome variations of deep-sea vent shrimps according to acclimation pressure: A homeoviscous response?*
- 16:45 Delphine Vergoz** (Rouen, France): *Lipidome of Acinetobacter baumannii persister cells*
- 17:00 Coffee & Posters**
- 17:00 GERLI General Assembly**
- 20:00 Gala dinner at "Madame Brasserie", Eiffel Tower 1st floor**

WEDNESDAY, OCTOBER 18, 2023

9:00 Session 6: Infection and Immunity

Chair persons : **Lhousseine Touqui & Cecile Gladine**

- 9:00 Nina Van Sorge** (Invited speaker, Amsterdam, The Netherlands): *Empowering human secreted phospholipase in anti-bacterial defense*
- 9:30 Jeroen F.J. Bogie** (Diepenbeek, Belgium): *Stearoyl-CoA desaturase-1 impairs the regenerative and anti-inflammatory properties of microglia and T cells in the brain*
- 9:45 Khaled Tighanimine** (Paris, France): *Glycerol-3-phosphate and Phosphoethanolamine homeostatic switch triggers senescence by rewiring lipid metabolism*
- 10:00 Ivo Gomperts Boneca** (Invited speaker, Paris, France): *When fat makes you happy*
- 10:30 Sharon Wein** (Montpellier, France): *The two first steps of the Kennedy phosphatidylcholine pathway are essential for the survival of the malaria parasite*
- 10:45 Inês Guerra** (Aveiro, Portugal): *Assessing Lipid Modulation in Medium-Chain Acyl-CoA Dehydrogenase Deficiency through Plasma Lipidomics Analysis*
- 11:00 Coffee Break**

11:30 Session 7: GERLI/SFN: Lipids and nutrition

Chair persons : **Sylvie Demignot & Olivier Laprevote**

- 11:30 Marie Caroline Michalski** (Invited speaker, Lyon, France): *Metabolic impacts of dietary polar lipids according to their specific residues in the gut*
- 12:00 Olivier Briand** (Lille, France): *Enterocyte lipid absorption is controlled by nuclear receptor NR1D1 regulation of IQGAP2-mediated cytosolic lipid droplet mobilization*
- 12:15 Raquel B. Gómez-Coca** (Seville, Spain): *Mineral oil hydrocarbons in olive oils: analysis and health*
- 12:30 Christophe Magnan** (Invited speaker, Paris, France): *Brain lipid sensing and control of energy balance*
- 13:00 Vincent Ciesielski** (Rennes, France): *May dietary pentadecanoic acid (C15:0) prevent physiological symptoms induced by a linoleic acid (C18:2 n-6) deficient diet in the rat?*
- 13:15 Julia Kuligowski** (Valencia, Spain): *Identification of oxylipins in human milk-derived extracellular vesicles with pro-resolutive potential in gastrointestinal inflammation*
- 13:30 Poster and Short talk prize, Closure, and Departure & Catering**