



17th GERLI lipidomics meeting

LIPIDS: from Membrane Dynamics to Signaling



November 6-9, 2022
Saint-Jean-Cap-Ferrat, France

<https://www.gerli.com>



Institut Valrose
Biologie



Institut Microbiologie,
Bioénergies et
Biotechnologie
Aix-Marseille Université

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des maladies et de la recherche médicale

SUNDAY afternoon - NOVEMBER 6

14:00 Registration

16:45 **Session 1: Welcome address, keynote lectures and PhD awards**

Chairpersons: Ez-Zoubir Amri, Frédéric Carrière and Gérard Lambeau

17:00 **Takao Shimizu** (Tokyo, Japan): *Adventures on PUFAs and lipid diversity*

18:00 GERLI PhD Award: **Alexandre Santinho** (Paris, France): *Biogenesis of triglyceride droplets from endoplasmic reticulum*

18:15 GERLI-SFN PhD Award: **Chloé Robert** (Lyon, France): *The impact of a common emulsifier, vegetable lecithin, on omega-3 status, lipid metabolism and the gut microbiota*

18:30 SFEL PhD Award: **Moulay Sahaka** (Marseille, France): *In situ monitoring of galactolipid digestion by infrared spectroscopy in both model micelles and spinach chloroplasts*

18:45 **Stéphane Schneider** (Nice, France): *Mediterranean diet: the benefits don't come from a pillbox*

19:15 Welcome reception

20:00 Dinner

MONDAY morning - NOVEMBER 7

8:30 **Session 2: Membrane dynamics and signaling “inside cells”**

Part 1 Chairpersons: Bruno Antonny - Valerie O'Donnell

8:30 **Dominique Langin** (Toulouse, France): *Hormone-sensitive lipase : a central integrator of adipocyte metabolism*

9:00 **Oral communications**

- **Jay Gamma** (Edmonton, Canada): *Protein N-myristoylation as a therapeutic target in acute myeloid leukemia*

- **Mikhail Golovko** (Grand Forks, USA): *Novel role for brain fatty acid synthesis in maintaining cellular redox status and protecting against oxidative stress in vivo*

- **Büsra Köse** (Istanbul, Turkey): *Lipid signatures of the neoplastic transformation of the cervix*

9:45 **Takeshi Harayama** (Sophia Antipolis, France): *Manipulating cellular lipidome to discover novel regulatory mechanisms of lipid composition*

10:15 Coffee break and poster viewing

10:45 **Session 2 Part 2** Chairpersons: Nicolas Vitale - Agnès Girard-Egrot

10:45 **Toni Petan** (Ljubljana, Slovenia): *Lipid droplets drive lipid mediator production and modulate ferroptosis*

11:15 **Oral communications**

- **Perrine Vermondén** (Bruxelles, Belgium): *Punicic acid, a lipid weapon with three conjugated double bonds against prostate cancer*

- **Maria Rosário Domingues** (Aveiro, Portugal): *Sustainable and value-added lipid extracts from *Nannochloropsis oceanica* obtained with ethanol with ultrasounds revealed by lipidomics*

- **Frédéric Arbiol** (Houdan, France): *Micro-algae and diatoms lipids characterization and quantification by HPTLC/FID technology*

12:00 **Poster session: Flash-talk presentations**

Chairpersons: Gérard Lambeau and Frédéric Domergue

12:30 Lunch

MONDAY afternoon - NOVEMBER 7

14:00 **Poster session**

All posters are exposed during the meeting.

15:30 **Session 3: Membrane dynamics and signaling “inside and outside cells”**

Part 1 Chairpersons: Takeshi Harayama - Marie-Caroline Michalski

15:30 **Soazig Le Lay** (Angers, France): *Adipose-derived extracellular vesicles: new lipid mediators of obesity-associated metabolic complications?*

16:00 **Oral communications**

- **Pascale Zimmermann** (Marseille, France): PLD2-MVB12B support small extracellular vesicle production
- **Jean-Marc Nicaud** (Jouy-en-Josas, France): *A novel, unique four-member protein family involved in extracellular fatty acid binding in Yarrowia lipolytica*
- **Nurit Argov-Argaman** (Rehovot, Israel): *Can milk (fat) favor bacteria growth over biofilm formation? Its all a matter of size!*

16:45 Tea break and poster viewing

17:15 **Session 3 Part 2** Chairpersons: Frédéric Carrière - Pascale Zimmermann

17:15 **Éric Boilard** (Québec, Canada): *Role of secreted phospholipase A2-IIA bactericidal activity in sterile inflammation*

17:45 **Oral communications**

- **Stefania Mariggio** (Naples, Italy): *Multimodal regulation of the osteoclastogenesis process by secreted group IIA Phospholipase A2*
- **Ariana Abawi** (Lyon, France): *Vector-tumor cell membrane interactions for optimized delivery of a promising drug, 4(RS)-4-F4t-Neuroprostane*
- **Philippe Caisse** (Saint-Priest, France): *Gattefossé, an international leading company in pharmaceutical excipients and cosmetic ingredients*

18:30 **Claude Forest** (Paris, France): *Biochimie and ethics in scientific publishing*

19:00 **Pierre Bernard-Savary** (La Sure en Chartreuse, France): *HPTLC, a method for approximate answers to the right questions?*

19:15 **GERLI General Assembly**

20:00 Dinner and social events

TUESDAY morning - NOVEMBER 8

8:30 **Session 4: Lipid mediators, inflammation, cancer and other diseases**
Part 1 Chairpersons: Gérard Lambeau - Soazig Le Lay

8:30 **Makoto Murakami** (Tokyo, Japan): *New insights into the biological roles of cytosolic and secreted phospholipase A2s*

9:00 **Oral communications**

- **Anna Bérot** (Lyon, France): *Development of anti-HER2 immunoliposomes to follow the biogenesis of tumor-derived or tumor-associated exosomes*
- **Marion Papin** (Tours, France): *Bioactive ether-lipids: Modulators of potassium channel SK3 involved in the aggressiveness of cancer cells*
- **Wouter Moolenaar** (Amsterdam, Netherlands): *Lysophosphatidic acid: simplicity meets complexity in the tumor immune microenvironment*

9:45 Coffee break and poster viewing

10:15 **Session 4 Part 2** Chairpersons: Wouter Moolenaar - Cécile Gladine

10:15 **Valerie O'Donnell** (Cardiff, UK): *Unravelling the complex role(s) of 12/15-lipoxygenase in inflammation and immunity*

10:45 **Oral communications**

- **Ali Hajeyah** (Kuwait city, Kuwait): *Phosphatidylthreonine is a procoagulant lipid detected in human blood and elevated in vascular disease*
- **Hennrique Taborda Ribas** (Groningen, Netherlands): *Braking down the barriers of the membrane in glioma: From bioinformatics to lipidomic*
- **Jacques Bodennec** (Bron, France): *GAO-3-02, a synaptamide-like compound, with neuroinflammation resolving properties, anti-seizure and pro-cognitive effects*

11:30 **Michel Record** (Toulouse, France): *The nuclear receptor LXR regulates bis(monoacylglycero)phosphate cellular content and the secretion of anti-tumor exosome-enriched vesicles*

12:00 Lunch or take-away

TUESDAY afternoon - NOVEMBER 8

- 12:30 **French Riviera session:**
Bus departure from Delcloy Hotel to Eze-Village
- 13:15 ***Guided tour Fragonard Factory or Exotic Garden in Eze-Village***
- 15:15 Bus departure from Eze-Village to Delcloy Hotel
- 16:00 **Session 5: Lipid mediators and metabolic disorders**
Part 1 Chairpersons: Ez-Zoubir Amri - Mireille Cormont
- 16:00 **Charna Dibner** (Geneva, Switzerland): *Circadian timing of lipid metabolism*
- 16:30 **Oral communications**
- **Inès Mucel** (Nice, France): *p53 regulates macrophages phenotype and their capacity to handle lipids*
 - **Pierre-Louis Batrow** (Nice, France): *Effect of PPAR α deletion specifically in brown adipocytes on adipocytes biology*
- 17:00 Tea break and poster viewing
- 17:30 **Session 5 Part 2** Chairpersons: Michel Record - Françoise Hullin-Matsuda
- 17:30 **Michael Gelb** (Seattle, USA): *Lipid biomarkers for newborn screening for treatable genetic diseases*
- 18:00 **Oral communications**
- **Francisca Teixeira** (Porto, Portugal): *Lipidomic studies involving steatosis induction using palmitic and linoleic fatty acids on HepG2 cells*
 - **Gianluca Baldanzi** (Novara, Italy): *The Wiskott–Aldrich syndrome protein inhibits diacylglycerol kinase α promoting IL-2 induction*
- 18:30 **Catherine Postic** (Paris, France): *Ketogenic low carbohydrate high fat diet prevents the metabolic alterations of ChREBP deficient mice*
- 19:00 **Poster session**
All posters are exposed during the meeting.
- 20:00 **Gala dinner and Celebrations (PhD awards GERLI, SFN, SFEL and more!)**

WEDNESDAY morning - NOVEMBER 9

9:15 **Session 6: Microbiota and infection up to SARS-CoV-2**

Part 1 Chairpersons: Vincent Rioux - Stefania Loffredo

9:15 **Christiane Schaffitzel** (Bristol, UK): *Discovery of a druggable pocket and a drug in SARS-CoV-2 spike glycoprotein*

9:45 **Oral communications**

- **Renaud Vincentelli** (Marseille, France): *High-Throughput methods for production, purification and interaction of proteins*

- **Xue Li Guan** (Singapore, Singapore): *The heads and tails of bacterial lipids in antimicrobial resistance*

- **Valerie O'Donnell** (Cardiff, UK): *Mapping the impact of inflammation on the lipid envelope of SARS-CoV-2*

10:30 Coffee break and poster viewing

11:00 **Session 6 Part 2** Chairpersons: Eric Boilard - Sylvie Demignot

11:00 **François Trottein** (Lille, France): *Impact of respiratory viral infections on gut microbiota's composition and functionality: from short chain fatty acids to glycolipids*

11:30 **Oral communications**

- **Fong-Fu Hsu** (St-Louis, USA): *Lipidome of gut microbiota bacteroides consisting of novel peptidolipid and sphingolipid families revealed by multiple-stage tandem mass spectrometry*

- **Justine Bertrand-Michel** (Toulouse, France): *Discovery and quantification of lipooamino acids in bacteria: new partners in microbiote studies?*

12:00 **GERLI-University Côte d'Azur Closing Lecture**

Chairperson: Gérard Lambeau

Sébastien Martin (Saint-Cézaire-sur-Siagne, France): *"Fleur de Festival", a perfume from the French Riviera*

12:30 **Closing remarks, next GERLI meeting, Teaser "The Lipidomyste Days"**

12:45 Lunch and departure

14:00 **Satellite Meeting:** "The Lipidomyste Days", Nov 9-10, same place.