

# LIPIDS IN AGRONOMY, HEALTH, AND DISEASE



## PROGRAM

### SUNDAY – OCTOBER 25

16:00	<b>Registration</b>
18:30	<b>WELCOME ADDRESS, GENERAL INFORMATION</b> <b>Hubert Schaller, Nicolas Vitale</b> , <i>organizing committee</i> <b>Jean-Marc Jeltsch</b> , <i>deputy President of the Université de Strasbourg</i> <b>Henry Dreyfus</b> , <i>honorary Directeur de Recherche at the Institut des Neurosciences Cellulaires et Intégratives</i>
	<b>Opening Lectures</b> Chairman – Hubert Schaller
19:00	<b>Gerhard Liebisch</b> , <i>Regensburg, Germany</i> Quantitative and metabolic profiling of lipid species
19:40	<b>Philippe Hugueney</b> , <i>Colmar, France</i> Prenol lipids of grapevine and aromas of alsatian wines
20:10	<b>Wine tasting, followed by a welcome mixer</b>

### MONDAY – OCTOBER 26

#### SESSION I

**Chemistry and physics of membrane lipids and drug delivery**

**Chairpersons – Agnès Girard-Egrot and Thierry Durand**

08:30	<b>Patrick Couvreur</b> , <i>Châtenay Malabry, France</i> Squalene based-nanomedicines
09:10	<b>Andrey Klymchenko</b> , <i>Strasbourg, France</i> Fluorescence imaging of biomembranes and lipid nanocarriers
09:50	<b>Julie Géan</b> , <i>Bordeaux, France</i> Role of the tannin-lipid interaction in wine taste. A molecular approach

10:05	<b>Zahra Kakhi</b> , <i>Strasbourg, France</i> Liposome, a highly versatile lipid-based carrier for antitumor vaccination by the respiratory route
10:20	<b>Camille Roesch</b> , <i>Izon Science, Oxford, UK</i> Advanced Micro- and Nano-sized particles characterisation with Tunable Resistive Pulse Sensing (TRPS) for lipid-based formulations
10:30	<b>COFFEE BREAK</b>
10:50	<b>Burkhard Bechinger</b> , <i>Strasbourg, France</i> Soft Membranes Adapt and Respond also Transiently – The SMART model explains the mechanism of action of antimicrobial peptides and their synergism

## SESSION 2

### Lipid modification for protein function

Chairpersons – Burkhard Bechinger and Thomas J. Bach

11:05	<b>Herbert Waldmann</b> , <i>Dortmund, Germany</i> Chemical biological modulation of Ras-signalling
11:45	<b>Paul-Alain Jaffrès</b> , <i>Brest, France</i> Amphiphilic compounds as modulator of SK3 ion channel: application for the prevention of bone metastases
12:00	<b>Ana Bouchet</b> , <i>Tours, France</i> Modulation of the membrane properties by alkyl-lipid derivate and its consequences in cancer metastasis
12:15	<b>Fanny Lemarié</b> , <i>Brest, France</i> Effect of preduodenal lipase inhibition on dietary caprylic acid gastric absorption and stomach ghrelin octanoylation in young rats
12:30	<b>Flash talks - poster session I – uneven poster numbers</b> Chairpersons – Erick Dufourc and Nicolas Vitale
12:50	<b>LUNCH</b>
14:20	<b>Poster session I</b>
15:20	<b>Marina Rautenbach</b> , <i>Stellenbosch University, Department of Biochemistry, Stellenbosch, South Africa</i> Membranolytic activity of the tyrocidines against filamentous fungi
16:00	<b>Agnès Girard-Egrot</b> , <i>Lyon, France</i> Role of the N-terminal amino acid polybasic cluster in the increase of the association rate during membrane binding of Vlsinin-Llike Proteins, a family of calcium-myristoyl switch proteins
16:15	<b>Eduardo Mateos-Diaz</b> , <i>Marseille, France</i> FTIR Study of the interaction of pancreatic lipase-related protein 2 with various phospholipid aggregates
16:30	<b>COFFEE BREAK</b>

## SESSION 3

### Lipid transport

Chairpersons – Frank Pfrieger and Michel Record

16:50	<b>Fred Maxfield</b> , <i>New York, USA</i> Intracellular sterol transport
17:30	<b>Guillaume Drin</b> , <i>Valbonne, France</i> A general PI(4)P-driven exchange mechanism to transport lipids within the cell
18:10	<b>Léa Wilhelm</b> , <i>Strasbourg, France</i> The lipid transfer protein STARD3, A molecular link between endosomes and the endoplasmic reticulum, modulates intracellular cholesterol localization
18:25	<b>Yves Sere</b> , <i>New York, USA</i> Role of ER-PM contact sites in sterol import from the plasma membrane to the endoplasmic reticulum in yeast
18:40	<b>Dusan Popov-Čeleketić</b> , <i>Utrecht, Netherlands</i> Membrane domain formation: a key factor for targeted intracellular drug delivery
	<b>GERLI thesis award session</b> Chairpersons – Brigitte Thomasset, Hubert Schaller and Vincent Rioux
18:55	<b>Joachim Moser von Filseck</b> , <i>Valbonne, France</i> A phosphatidylinositol 4-phosphate-powered exchange mechanism to create a lipid gradient between membranes
19:10	<b>Joël Lemière</b> , <i>Paris, France</i> Actin cytoskeleton and membrane shaping: from liposome to cellular reconstruction
20:00	<b>DINNER</b>

## TUESDAY – OCTOBER 27

## SESSION 4

### Lipid analysis

Chairpersons – Dominique Rainteau and Gerhard Liebisch

08:30	<b>Laura Nyström</b> , <i>Zürich, Switzerland</i> High-resolution mass spectrometry and lipidomics for lipid identification and sample differentiation
09:10	<b>Toshihide Kobayashi</b> , <i>Tokyo, Japan</i> Imaging lipids and lipid domains
09:50	<b>Philippa Hart</b> , <i>Waters Corporation, Wilmslow, UK</i> Current and future perspectives of Multimode Mass Spectrometry imaging with MALDI and DESI applied to a variety of samples

10:00	<b>Fernando Martínez-Montañés</b> , <i>Fribourg, Switzerland</i> A mass spectrometry-based in vivo assay for studying sphingolipid dynamics in <i>Saccharomyces cerevisiae</i>
10:15	<b>Justine Lanzini</b> , <i>Paris, France</i> Lipid biomarkers in urine samples from renal graft injuries in kidney allograft recipients
10:30	<b>COFFEE BREAK</b>
10:50	<b>Fong-Fu Hsu</b> , <i>St-Louis, USA</i> Electrospray ionization with low-energy collisionally activated dissociation tandem mass spectrometry of ceramides: mechanisms of fragmentation and structural characterization
11:05	<b>Donia Essaid</b> , <i>Châtenay Malabry, France</i> Subcellular fractionation and lipidomic profiling for building an artificial lipidic model

## SESSION 5

### Plant lipidomics and the agri-resources

Chairpersons – Erick Dufourc and Hubert Schaller

11:20	<b>Ljudmilla Borisjuk</b> , <i>Gatersleben, Germany</i> NMR imaging of lipids in plants and seeds
12:00	<b>Thierry Durand</b> , <i>Montpellier, France</i> Phytosteranes, Non Enzymatic Metabolites of $\alpha$ -Linolenic Acid: Myth or Reality?
12:15	<b>Flash talks - poster session 2 – even poster numbers</b> Chairpersons – Erick Dufourc and Benoît Frisch
12:45	<b>LUNCH</b>
13:45	<b>Poster session 2</b>
14:45	<b>Yariv Brotman</b> , <i>Potsdam, Germany</i> Plant lipidomes in agronomy and breeding
15:25	<b>Mehmet Nail Nasir</b> , <i>Gembloux, Belgium</i> Interactions of key intermediates of plant oxylipins with plant plasma membrane at the molecular level
15:40	<b>Sabine Jourdain</b> , <i>Braker, Wissembourg, France</i> Multi-modal use of FT-ICR applied to the complexity of lipid analysis
15:50	<b>GERLI poster awards session</b> Chairwoman – Catherine Tomasetto
16:00	<b>COFFEE BREAK</b>

16:20	<b>GERLI general assembly</b>
17:20	<b>Bus to Obernai, guided pedestrian tour in Obernai</b>
20:00	<b>Congress dinner at « La Halle aux Blés », Obernai</b>
22:30	<b>Bus to « Le Bischenberg »</b>

## WEDNESDAY – OCTOBER 28

### SESSION 6

#### Metabolism of lipids in cancer

Chairpersons – **Catherine Tomasetto and Benoît Frisch**

08:30	<b>Marc Poirot, Toulouse, France</b> Cholesterol metabolism and cancer
09:10	<b>Johan Swinnen, Leuven, Belgium</b> Lipidomics: a discovery tool in Cancer Research
09:50	<b>Vesna Brglez, Valbonne, France</b> On the regulation of group X sPLA2 in breast cancer cells and its role in cell survival via lipid droplet formation and modulation of lipid metabolism
10:05	<b>Erwan Beauchamp, Edmonton, Canada</b> Development of a precision medicine approach to treat B cell lymphomas using a N-myristoyltransferase inhibitor
10:20	<b>COFFEE BREAK</b>

### SESSION 7

#### Lipid homeostasis and neurodegenerative diseases

Chairpersons – **Nicolas Vitale and Gérard Lambeau**

10:40	<b>Gilbert Di Paolo, New York, USA</b> Endolysosomal dysfunction and lipid dysregulation in Alzheimer's disease
11:20	<b>Konrad Sandhoff, Bonn, Germany</b> Membrane lipids regulate (glyco-)sphingolipid catabolism, its enzymes, lipid binding and transfer proteins
12:00	<b>Thierry Oster, Nancy, France</b> Brain membrane aging : functional outcomes and protection by dietary $\omega 3$ polyunsaturated fatty acids
12:15	<b>Amanda Lo Van, Lyon, France</b> Study of the effects of docosahexaenoic acid (DHA) and a structured phospholipid containing DHA on an in vitro model of neurogenesis and stroke

12:30	<b>Hervé Moine</b> , <i>Illkirch, France</i> The Fragile X Mental Retardation Protein controls diacylglycerol kinase activity in neurons
12:45	<b>LUNCH</b>

## SESSION 8

### Lipid signalling and metabolism

Chairpersons – **Roméo Ricci and Vincent Rioux**

13:45	<b>Christian Wolfrum</b> , <i>Zürich, Switzerland</i> Lipid signalling in health and disease
14:25	<b>Sabrina Sailer</b> , <i>Innsbruck, Austria</i> Alkylglycerol monooxygenase is required for differentiation of 3T3-L1 murine fibroblasts to adipocytes
14:40	<b>Eva-Maria Kuech</b> , <i>Hannover, Germany</i> Lipid raft abnormalities induce gastrointestinal symptoms in Niemann-Pick type C
14:55	<b>Jean-Luc Olivier</b> , <i>Nancy, France</i> An arachidonic acid-rich diet increases the mouse susceptibility to the neurotoxic effects of amyloid- $\beta$ oligomers
15:10	<b>CLOSING LECTURE</b> <b>Yvon Le Maho</b> , <i>Strasbourg, France</i> How refeeding is triggered before lipids are totally depleted in spontaneously fasting animals?
15:50	<b>Announcement of GERLI 2016</b>
16:00	<b>Closure</b>
16:30	<b>Bus to Strasbourg central railway station or airport</b>