

## Inserm Workshop 267

**Protéines membranaires en systèmes reconstitués : des dernières avancées de la recherche fondamentale aux applications thérapeutiques**  
**Membrane proteins in reconstituted systems: from the latest advances in fundamental research to therapeutic applications**

**30 mars-1er avril 2022** ■ **March 30-April 1<sup>st</sup> 2022** ■ **Bordeaux, France**

Mercredi 30 mars 2022 ■ **Wednesday March, 30 2022**

15:30 - 16:00	<b>Reception of participants</b>
16:00 - 16:15	Welcome and presentation by the organizers
<b>SESSION I</b>	<b>Methodological developments for the heterologous expression of proteins</b>
16:15 - 17:00	Structure and function of G protein-coupled receptors. <b>Chris Tate (MRC, Cambridge, United Kingdom)</b>
17:00 - 17:30	<b>Coffee break</b>
17:30 - 18:00	Tuning bacterial strains for the heterologous expression of membrane proteins. <b>Bruno Miroux (IBPC, Paris, France)</b>
18:00 - 18:30	Methods of heterologous expression of membrane proteins for purification and study in reconstituted systems. <b>Isabelle Mus-Veteau (IPMC, Sophia Antipolis, Nice, France)</b>
18:30 - 19:00	Novel engineering strategies and structural and mechanistic insights into GPCRs. <b>Andreas Plückthun (ETH Zurich, Switzerland)</b>
19:00 - 19:30	General questions from the audience about the techniques
19:30	<b>Dinner</b>

Jeudi 31 mars 2022 ■ **Thursday March, 31 2022**

06:30 - 08:30	<b>Breakfast</b>
<b>SESSION II</b>	<b>Membrane mimicking systems</b>
08:30 - 09:15	What kind of beach buoy to manipulate membrane proteins in vitro? An overview of what is available. <b>Cécile Breyton (IBS, Grenoble, France)</b>
09:15 - 09:45	CyclAPols: a novel generation of amphipols combining solubilizing and stabilizing properties required for membrane protein studies. <b>Manuela Zoonens (IBPC, Paris, France)</b>
09:45 - 10:15	<b>Coffee break</b>
10:15 - 10:45	Discovery of Novel Therapeutics against GPCRs, Ion Channels & Transporters using the Salipro™ Technology. <b>Pilar Lloris-Garcera (Salipro Biotech, Stockholm, Sweden)</b>

10:45 - 11:15	Detergent-free membrane protein purification using SMA polymer. <b>Alice Rothnie (Aston University, Birmingham, United Kingdom)</b>
11:15 - 11:45	Computational microscopy of membrane proteins with Martini 3 models. <b>Paulo Telles de Souza (IBCP, Lyon, France)</b>
11:45 - 12:00	General questions from the audience about the techniques
12:00 - 14:00	<b>Lunch</b>
<b>SESSION III</b>	<b>Membrane protein study and lipid Interplay</b>
14:00 - 14:30	Controlled lipidation enables crystallization of membrane transporters. <b>Cédric Govaerts (Université Libre de Bruxelles, Belgium)</b>
14:30 - 15:00	The role of the lipid environment in GPCR activity: <i>in vitro</i> and <i>in cellulo</i> approaches. <b>Isabel Alves (CBMN, Bordeaux, France)</b>
15:00 - 15:30	H/D exchange coupled to Mass Spectrometry: a multifaceted tool to study membrane proteins. <b>Chloé Martens (Université Libre de Bruxelles, Belgium)</b>
15:30 - 15:45	<b>Coffee Break</b>
15:45 - 16:15	Dynamic interplay between lipids and membrane proteins. <b>Laurent Catoire (IBPC, Paris, France)</b>
16:15 - 16:45	General questions from the audience about the techniques
16:45 - 18:00	<b>Poster session</b>
18:00 - 20:00	<b>Wine Museum</b>
20:00	<b>Dinner</b>

Vendredi 1er avril 2022 ■ **Friday April, 1<sup>st</sup> 2022**

06:30 - 08:30	<b>Breakfast</b>
<b>SESSION IV</b>	<b>Membrane proteins in Pathology and other strategies</b>
08:30 - 09:15	Cellular Machineries in Quality Control and Immune Defense. <b>Robert Tampé (Goethe University, Frankfurt, Germany)</b>
09:15 - 09:45	From antibiotic sensitizers to true efflux pump inhibitors: a long road that must pass through reconstituted efflux pumps. <b>Jean-Michel Bolla (Faculté de Pharmacie, Marseille, France)</b>
09:45 - 10:15	<b>Coffee Break</b>
10:15 - 10:45	The ABC transporter MsbA adopts the wide inward-open conformation in living cells. <b>Markus Seeger (University of Zurich, Switzerland)</b>
10:45 - 11:15	Construct optimisation, membrane mimetics and data treatment: few things to optimise for cryoEM of membrane proteins. <b>Hugues Nury (IBS, Grenoble, France)</b>
11:15 - 11:45	NMDA receptors: allosteric machines in brain function and dysfunction. <b>Pierre Paoletti (IBENS, Paris, France)</b>
11:45 - 12:15	General question from the audience and conclusion
12:15 - 14:00	<b>Lunch</b>
14:00	<b>Departure</b>