



**J.E. Dumont Meeting Association
Mont Sainte Odile, France, 1-4 October, 2025**

47th Symposium on Hormones and Cell Regulation

New GPCRs as targets to treat diseases

Organizers:

Dr Jean-Philippe Pin, Institut de Génomique Fonctionnelle, Montpellier, France
Jean-philippe.pin@igf.cnrs.fr

Dr Ralf Jockers, Institut Cochin, Paris, France
Ralf.jockers@inserm.fr

and the Scientific Committee : B. Payrastre (President), V. Flockerzi, V. Haucke, D. Carling, M. Sibilio, I. Huhtaniemi, A. Maggi, J-P. Pin, T. Gudermann, J. Viaud.

Presentation

G protein-coupled receptors (GPCRs) are encoded by the most abundant gene family in the human genome, representing 3% of the protein coding genes (820 genes). These cell surface receptors are expressed in every cell, and each cell type express a large set of these receptors, varying during development and physiological situations. Accordingly, GPCRs represent about 30% of the targets of therapeutic drugs actually on the market, and still represent a major interest in drug development programs. Whereas GPCRs were well recognized as targets for the treatment for various diseases including allergy, psychiatric and neurologic, cardiovascular among others, recent development revealed their high potential for the treatment of various important diseases like cancers, brain and metabolic diseases, diabetes.

The Mont Ste Odile meetings were established in the 50's by Jacques Dumont with the idea to bring together scientists from both sides of the last world war to strongly favor reconciliation. This meeting concentrates on the mode of action of hormones and other messengers in cell regulation, providing key information for drug development.

The 47th meeting will be on Oct 1st-Oct 4th 2025, and dedicated to GPCRs as novel targets for diseases.

The meeting will bring three keynote speakers, leaders in the field of GPCRs for the analysis of their structure, and their interest in cancer and brain disease treatments.

It will be organized around 5 mini-symposia of 3-4 invited speakers and will cover novel topics in the field: 1) the analysis of GPCRs at the single molecule level, elucidating their very precise location, and their structural dynamics, as important aspects of their function and for the understanding of drug action; 2) the recent observations that GPCRs offer novel possibilities to treat cancers; 3) how GPCRs involved in the control of metabolism can be used to treat various diseases; 4) novel strategies to treat brain diseases, including immunotherapies targeting GPCRs; and 5) the use of AI to better characterize GPCR signaling properties and accelerate drug discovery.

Support will be provided to help young scientists to participate, and a poster session will be organized to allow them to present their work. In each session, two young scientists will be selected for a short presentation based on the abstracts submitted.

Preliminary program:

Wednesday October 1st

16:00 – 16:15 **Welcome**

Session 1: Molecular and cellular dynamics of GPCRs (Chair: TBC)

16:15 – 16:50 **Emmanuel MARGEAT**, Centre de Biologie Structurale, Montpellier
"Structural dynamics of mGlu receptors by 2 and 3 colors smFRET".

16:50 – 17:25 **Davide CALEBIRO**, Birmingham, UK
"New insights into GPCR signalling from single-molecule microscopy".

17:25 – 18:00 **Tobias LANGENHAN**, Leipzig, Germany
"Mechanosensing by adhesion G protein-coupled receptors".

18:00 – 18:30 **2 x Research talks selected from abstracts**

18:30 – 20:00 Dinner

20:00 – 21:00 **The Jacques E. Dumont keynote lecture** (Chair: TBD)
Gebhard SCHERTLER, Paul Scherrer Institute, Villigen, Switzerland
*"From structural studies of GPCRs to application:
Engineering OptoGPCRs as scientific tools and for optogenetic applications"*

21:00 Networking and discussion

Thursday 2nd October

Session 2: GPCRs as novel targets for Cancer (Chair: TBC)

09:00 – 09:35 **Martine SMIT**, Vrije Universiteit, Amsterdam, The Netherlands
"Nanobodies targeting GPCRs to control metastasis".

09:35 – 10:10 **Dimitri PLACANTONAKIS**, NYU, New York, USA
"Function and targeting of adhesion GPCRs in brain tumors".

10:10 – 10:40 **2 x Research talks selected from abstracts**

10:40 – 11:15 Coffee break

11:15 – 11:50 **Stefan SCHANN**, Domain Therapeutics, Illkirch, France
"GPCRs for cancer".

11:50 – 12:25 **Helene CASTEL-GANDOLFO**, Rouen, France
"Glioblastoma Invasion and Microenvironment: Potential Handling by Discret G proteins/GPCRs".

12:25 – 12:55 **2 x Research talks selected from abstracts**

12:55 – 14:30 Lunch

14:30 – 18:30 Networking / Round Table discussion

18:30 – 20:00 Dinner

20:00 – 21:00 **Keynote lecture 2:** (Chair: TBD)

Prof Michel BOUVIER Institut Recherche Inflammation et Cancer, Montreal, Canada
“Biased spatial propagation of GPCR signaling”

21:00 Poster Session 1

Friday 3rd October

Session 3: GPCRs as targets for Metabolic Diseases (Chair: TBC)

09:00 – 9:35 **Timo D MULLER**, Diabete Center, Munchen, Germany

“Novel Insights into Regulation of Energy Metabolism by GIPR agonism and antagonism”.

09:35 – 10:10 **Julie DAM**, Institut Cochin, Paris

“A non-canonical mechanism driving adipose tissue browning through a GPCR”

10:10 – 10:40 Coffee break

10:40 – 11:15 **Shirly PINTO**, Kallyope, New York, USA

“Activation of gut enteroendocrine cells leads to synergistic hormone secretion in murine models and human, potentially playing a role in weight loss and glucose control”

11:15 – 11:50 **Zachary GERHART-HINES**, Novo Nordisk, Denmark

“Long-acting NK agonists”.

11:50 – 12:20 **2 x Research talks selected from abstracts**

12:30 – 14:00 Lunch

Session 4: GPCRs as targets for brain and inflammatory diseases (Chair: TBD)

14:00 – 14:35 **Philippe RONDARD**, IGF, Univ Montpellier, Montpellier, France

“Nanobodies targeting GPCRs to treat brain diseases”.

14:35 – 15:10 **Peter Jeffrey CONN**, Vanderbilt Univ, Nashville, USA

“Muscarinic receptors as targets for Schizophrenia”.

15:10 – 15:40 Coffee break

15:40 – 16:15 **Kirill MARTEMYANOV**, University of Miami, Jupiter, USA

“Glycine receptor: a new target for antidepressants”.

16:15 – 16:50 **Paolo MEONI**, Sanofi, Gent, Belgium

“Identification and characterization of a Nanobody® CX3CR1 antagonist as a modulator of immune cell chemotaxis”.

16:50 – 17:35 **3 x Research talks selected from abstracts**

18:30 – 20:00 Dinner

20:00 – 21:00 **Keynote lecture 3:** (Chair: TBD)

Prof Bernhard BETTLER, Institute of Physiology, Pharmazentrum, Basel, Switzerland
“Genetic Implication of GABA_B Receptors in Neurological and Psychiatric Disorders”

21:00 Poster Session 2

Saturday 4th September

09:00 – 12:30 Session 5: AI to help GPCR drug discovery (Chair: TBC)

9:00 – 09:35 **Aurélien RIZK**, InterAx Biotech, Villigen, Switzerland

"GPCR Signaling Models for Function-Driven Drug Discovery"

09:35 – 10:10 **Chris de GRAAF**, Structure Therapeutics, Switzerland

"Structure-in-the-Loop AI-Augmented GPCR Drug Discovery"

10:10 – 10:40 Coffee break

10:40 – 11:15 **Caroline LOW**, Isomorphics Labs - UK

"Application of ligand-protein structure prediction to GPCRs"

11:15 – 11:45 **David GLORIAM**, University of Copenhagen, Copenhagen, Denmark

"GPCR drug discovery trends and resources in GPCRdb"

11:45 – 12:15 2 x Research talks selected from abstracts

12:15 – 12:30 Wrap-up

12:30 Lunch and Departure
