

GPCR Workshop 2025 Agenda

Day 1: Dec. 12, 2025

8:00am - 9:00am Breakfast

9:00am - 12:00pm Brian's Birthday Session (*alumni + friends*)

12:00pm - 1:00pm Lunch

2:00pm - 4:00pm REGISTRATION

Session 1

Chair: Brian Kobilka *Stanford University*

4:00pm - 4:05pm

Welcome: Brian Kobilka

Brian Kobilka
Stanford University

4:05pm - 4:45pm

Receptor-stimulated G12 signaling regulates key metabolic functions

Jürgen Wess
NIDDK, NIH

4:45pm - 5:25pm

Uncovering unconventional GPCR stimuli

Aashish Manglik
UCSF

5:25pm - 6:05pm

Translational mechanisms for GPR75 loss-of-function driving protection from obesity

Judith Altarejos
Regeneron Pharmaceuticals

6:05pm - 6:35pm

Kidney Exchange

Alvin Roth
Stanford University

6:35pm – onward Reception

Day 2: Dec. 13, 2025

7:30am - 8:20am Breakfast

Session 2

Chair: Brian Kobilka *Stanford University*

8:20am - 9:10am

Higher Order Transient Structures and the Principle of Dynamic Connectivity in Membrane Signaling

Rod MacKinnon
The Rockefeller University

9:10am - 9:50am

Exploring the Subcellular Organization of GPCR Signaling

Mark von Zastrow
UCSF

9:50am - 10:05am SHORT TALK #1

Identifying the role of the extracellular vestibule in ligand-dependent b₂-adrenergic receptor endocytosis

Nicole McIntosh
University of California, San Diego

10:05am - 10:25am

Break

10:25am - 11:05am

Arrestin binding to GPCRs lacking the C-tail

Irene Coin

Leipzig University

11:05am - 11:45am

A structural view of MC4R signaling induced by ligands and genetic variants relevant to body weight regulation

Patrick Scheerer

Charité Universitätsmedizin Berlin

11:45am - 12:25pm

Computational reprogramming of GPCR signal transduction

Patrick Barth

Ecole Polytechnique Fédérale de Lausanne

12:25pm - 12:40pm**SHORT TALK #2**

Compartmentalized autonomic signaling reveals distinct sympathetic and parasympathetic domains in cardiac myocytes

Alexander Demby

University of Oxford

12:40pm - 3:00pm

Lunch and Poster Viewing

Session 3

Chair: Jürgen Wes *NIDDK, NIH*

3:00pm - 3:40pm

Structure and function of non-canonical GPCR signaling complexes

Kirill Martemyanov

University of Florida

3:40pm - 4:20pm

Mechanistic insights into G-protein coupling with an agonist-bound GPCR: implications for coupling specificity

Peter Hildebrand

Leipzig University

4:20pm - 5:00pm

A new type of biosensor to dissect GPCR conformational equilibria in intact cells

Andreas Bock

University Medical Center Mainz

5:00pm - 5:15pm SHORT TALK #3

Structural basis of a stepwise Gq activation by a chemokine receptor US28

Naotaka Tsutsumi

Institute of Science Tokyo

5:15pm - 5:30pm SHORT TALK #4

Fluorogenic-Based Biosensors Reveal Specific and Universal Regulators of Endosomal GPCRs

Braden Lobinger

Oregon Health Sciences University

5:30pm - 6:30pm Poster Session

6:30pm - 8:00pm Dinner

8:00pm - 10:00pm INTERACTIVE SESSION #1

Roger Sunahara

UCSD

Day 3: Dec. 14, 2025

7:30am - 8:30am Breakfast

Session 4

Chair: Aashish Manglik *UCSF*

8:30am - 9:10am

Leveraging Computational and Experimental Data to Advance Knowledge of GPCR Signaling and Drug Discovery

Marta Filizola

*Icahn School of Medicine
at Mount Sinai*

9:10am - 9:25am SHORT TALK #5

The mechanisms of PLC3 activation by Gq and G

Nevin Lambert

Medical College of Georgia, Augusta University

9:25am - 10:05am

New insights into the spatiotemporal organisation of GPCR signalling

Davide Calebiro

University of Birmingham

10:05am - 10:25am Break

10:25am - 11:05am

How to transduce force into biochemical commands – Mechanosensing by adhesion GPCRs

Tobias Langenhan

Leipzig University

11:05am - 11:45am

Structure and function of GPCR-toxin complexes

Sébastien Granier

Institut de Génomique Fonctionnelle, CNRS/INSERM/Université de Montpellier

11:45am - 12:00pm SHORT TALK #6

Positive allosteric modulation of CCK1R through the third intracellular loop

Fredrick Sadler

University of Minnesota

12:00pm - 12:30pm

Targeting a cryptic pocket in cannabinoid receptors drives peripheral and functional selectivity

Susruta Majumdar

Washington University St. Louis

12:30pm - 12:45pm SHORT TALK #7

Ligand-dependent activation trajectories dictate GPCR signaling efficacy in intact cells

Romy Thomas

Leipzig University

12:45pm - 3:00PM Lunch and Poster Viewing

Session 5

Chair: Sebastien Granier *Institut de*

Génomique Fonctionnelle, CNRS/INSERM/Université de Montpellier

3:00pm - 3:40pm

Unconventional GPCR Signaling in the Hedgehog Pathway and Beyond

Ben Myers

Huntsman Cancer Institute, University of Utah

3:40pm - 4:20pm

Exploring non-canonical signaling mechanisms across diverse GPCRs

Ruth Huttenhain

Stanford University

4:20pm - 5:00pm

Conformational coupling between extracellular and transmembrane domains modulates holo-adhesion GPCR function

Demet Arac

University of Chicago

5:00pm - 5:15pm SHORT TALK #8

Unnatural Amino Acid Labeling and smFRET Reveal Intermediate States in Glucagon Receptor Signaling

Shi Feng
Stanford University

5:15pm - 5:30pm SHORT TALK #9

Single G Protein Turnover Defines DRD2's Coupling Efficiency

Desye Ambaw
The University of Queensland

5:30pm - 6:30pm Poster Session

6:30pm - 8:00pm Dinner

8:00pm - 10:00pm INTERACTIVE SESSION #2

Nevin and Sivaraj

Day 4: Dec. 15, 2025

7:30am - 8:30am Breakfast

Session 6

Chair: Mark von Zastrow *UCSF*

8:30am - 9:10am

Exploring Intracellular GPCRs and Their Role in Pathway Crosstalk

Nina Tsvetanova
Duke University

9:10am - 9:25am SHORT TALK #10

Age-dependent GPCR expression dynamics guides precision medicine for fetal, pediatric, and geriatric populations

Katarina Nemec
St. Jude Children's Research Hospital

9:25am - 10:05am

A Survival Pressure Selection method for GPCR drug screening

Xiangyu Liu
Tsinghua University

10:05am - 10:25am Break

10:25am - 11:05am

Using nanobodies as tools to interrogate and control GPCR signaling

Andrew Kruse
Harvard Medical School

11:05am - 11:45am

Assembly required – how cells build functional ion channel complexes

Tino Pleiner
Stanford University

11:45am - 12:00pm SHORT TALK #11

title

Tbd
University

12:00pm - 12:30pm

Multimodal β -arrestin functions through membrane nanodomain formation

Asuka Inoue
Kyoto University

12:30pm - 3:00pm

Lunch and Poster Viewing (*Poster takedown at end of this session*)

Session 7

Chair: Aashish Manglik *UCSF*

3:00pm - 3:40pm

Application of genetically encoded dopamine and 2nd messenger sensors challenge paradigms of dopamine receptor signaling in the striatum

Ulrik Gether
University of Copenhagen

3:40pm - 4:20pm

The role of protein dynamics in GPCR signaling / Closing Remarks

Brian Kobilka

Stanford University

4:20pm - 5:00pm

Conference Discussion / Closeout

6:00pm - 10:00pm

Banquet Dinner