



GPCR Workshop 2019

ConfometRx Research Foundation

Bringing together scientists from academia, biotechnology and pharmaceutical industry to exchange ideas, disseminate information, and discuss challenges related to drug development for G-protein coupled receptors in order to facilitate the discovery of more effective and selective therapeutics for unmet medical needs.

GPCR Workshop Agenda

PROGRAM - SESSIONS AND TOPICS:

Day 1		Sunday, December 1, 2019
14:00 – 15:50	Registration	
15:50 – 16:00	Welcome	<i>Brian Kobilka, Chair, Stanford University, CA USA</i>
16:00 – 16:50	Molecular Puzzles in Hedgehog Signaling	<i>Aashish Manglik, UCSF, CA USA</i>
16:50 – 17:30	Mechanisms of Frizzled Receptor Signaling	<i>Bill Weis, Stanford University, CA USA</i>
17:30 – 18:30	Keynote Lecture – Receptors to Behavior	<i>Charles Zuker, Columbia University, NYC USA</i>
18:30	Welcome Reception	

Day 2		Monday, December 2, 2019
Session 1		Computational Methods
8:30 – 9:10	Data Science Approaches to GPCR Signaling	<i>M. Madan Babu, MRC Cambridge UK</i>
9:10 – 9:50	Understanding How to Fine-Tune muOpioid Receptor Signaling Towards the Discovery of Safer Analgesics	<i>Marta Filizola, Mt. Sinai, NYC USA</i>
9:50 – 10:30	Structural and Functional Diversity of GPCR Oligomers	<i>Leonardo Pardo, University of Barcelona, Spain</i>
10:30 – 11:00	Break	
Session 2		Drug Discovery
11:00 – 11:40	Molecular Simulation for the Design of Finely Tuned GPCR-targeted Drugs	<i>Ron Dror, Stanford University, USA</i>
11:40 – 12:20	Structural Biology of Class B GPCRs – A Ligand and Pharma Perspective	<i>Steffen Reedtz-Runge, Novo Nordisk, Denmark</i>
12:20 – 13:00	Structure and Pharmacology of Lipid GPCRs in Asthma	<i>Cheng Zhang, University of Pittsburgh, PA USA</i>
13:00 – 15:30	Lunch and Poster Viewing	
15:30 – 19:00	Free Time and Preparation for Interactive Discussion Session	
19:00 – 22:00	Interactive Discussion	<i>Chair, Brian Kobilka</i>

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PROGRAM - SESSIONS AND TOPICS:

Day 3		Tuesday, December 3, 2019
Session 3	GPCR Structure and Dynamics 1	<i>Chair, Patrick Sexton</i>
8:30 – 9:10	Newer GPCR56 Modulators to Probe Adhesion GPCR Activation Mechanisms	<i>Greg Tall, University of Michigan, USA</i>
9:10 – 9:50	Unraveling the Molecular Basis of Biased Agonism at class B GPCRs	<i>Denise Wootten, Monash University, Australia</i>
9:50 – 10:30	Decoding G-protein Coupling Selectivity with a Large Functional Dataset	<i>Asuka Inoue, Tohoku University, Japan</i>
10:30 – 11:00	Break	
Session 4	Signaling and Physiology 1	<i>Chair, Arthur Christopoulos</i>
11:00 – 11:40	GPCR Signaling from Internal Membrane Compartments	<i>Roshanak Irannejad, UCSF, CA USA</i>
11:40 – 12:20	Intracellular GPCRs Play Key Roles in Vivo	<i>Karen O'Malley, Washington University School of Medicine, St. Louis, USA</i>
12:20 – 13:00	Conventional and Unconventional Receptor-G Protein Coupling	<i>Nevin Lambert, Medical College of Georgia, USA</i>
13:00 – 15:30	Lunch	
15:30 – 19:00	Free Time and Preparation for Interactive Discussion Session	
19:00 – 22:00	Interactive Discussion	<i>Arthur Christopoulos</i>

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PROGRAM - SESSIONS AND TOPICS:

Day 4	Wednesday, December 4, 2019	
Session 5	GPCR Structure and Dynamics 2	<i>Chair, Denise Wootten</i>
8:30 – 9:10	Illuminating the Energy Landscape of GPCRs: The Key Contribution of Solution-State NMR Associated to a Bacterial Expression Host	<i>Laurent Catoire, Universite de Paris, Paris France</i>
9:10 – 9:50	The Structure and Function of Alkaline Ceramidase 3 are Related to Adiponectin Receptors	<i>Sebastien Granier, University of Montpellier, France</i>
9:50 – 10:30	Structural Basis for KCTD-mediated Rapid Desensitization of GABAB Receptor Signaling	<i>Andy Kruse, Harvard University, Cambridge, MA USA</i>
10:30 – 11:00	Break	
Session 6	Signaling and Physiology 2	
11:00 – 11:40	Leveraging Functional Selectivity/Biased Signaling at GPCRs for Therapeutic Benefits	<i>Marc Caron, Duke University, North Carolina USA</i>
11:40 – 12:20	Illuminating the “Dark Matter” of the Gut Microbiota Metabolome	<i>Noah Palm, Yale University, CT USA</i>
12:20 – 13:00	The Expanded RAMP Interactome	<i>Kathleen Caron, UNC USA</i>
13:00 – 15:30	Lunch	
15:30 – 18:00	Interactive Session	<i>Denise Wootten</i>
18:30	Sunset Dinner/Banquet	

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PROGRAM - SESSIONS AND TOPICS:

Day 5	Thursday, December 5, 2019	
Session 7	Potpourri	<i>Brian Kobilka</i>
9:30 – 10:10	Density-dependent Mu Opioid Receptor Function Revealed by Single-molecule Tracking	<i>Jonathan Javitch, Columbia University, NYC USA</i>
10:10 – 10:50	Exploring GPCR and Membrane Protein Dynamics with X-ray Free Electron Lasers and cryo-EM	<i>Gebhard Schertler, Paul Scherrer Institut, Switzerland</i>
10:50 – 11:40	TBD	<i>TBD</i>
11:40 – 12:00	Closing Remarks by Organizers	