



11TH ADHESION GPCR WORKSHOP PROGRAM 2024

MEXICO CITY
OCT 23-25

Organized by: **Dr. Antony Boucard** and **Dr. Yamina Berchiche**

www.ecosystem.drgpcr.com/adhesion-gpcr-workshop-2024-about

11TH ADHESION GPCR WORKSHOP 2024

MEXICO CITY
OCT 23-25



Welcome to the **Adhesion GPCR Workshop 2024**, hosted in the vibrant heart of Mexico City at the prestigious venue, **CINVESTAV** – Centro de Investigación y de Estudios Avanzados del IPN (in English: Center for Research and Advanced Studies of the National Polytechnic Institute).



About the venue

Cinvestav: Centro de investigación y de Estudios Avanzados del IPN
[Av. Instituto Politécnico Nacional no 2508 Mexico City, C.P. 07360](#)

Room: [Auditorium Arturo Rosenblueth](#)

*Have an ID card ready (Passport, Driver's license, etc), as this will be required at the venue entrance



AGPCR24 - Full Agenda

OCT 23

Oct 23 - 9:00 AM

Registration & Welcoming Remarks

10:00 AM

Student Flash Presentations

Health and Disease, Metabolism, Nervous System, Proteomics and Transcriptomics, Receptor Structure, Signaling and Activation Mechanism

Abhishek Kumar Singh · Alex Torrelli-Diljohn · Emmanouil Kyrloglou · Vasiliki Karagiannakou · Lara-Sophie Brodmerkel · Rashed Rezwan Parag · Hailey Steichen · Tyler Bernadyn · Jesse Stillwell

12:00 PM

Coffee Break with light snacks

12:30 PM

State of the Art Talk

Adhesion GPCR in Mechanobiology

Nicole Scholz

1:00 PM

Plenary Lecture

Identification and Functional Characterization of Adhesion GPCRs As Steroid Hormone Receptors and Hearing and Balance Receptors

Jinpeng Sun

2:00 PM

Complimentary Lunch

3:00 PM

Session I

Tethered agonist-dependent/independent activation mechanism in AGPCRs
Signe Mathiasen · Demet Araç · Yan Zhang · Andrew Dates · Frank Kwarcinski · Peng Xiao

5:00 PM

Leaving for City Center

5:30 PM

Mexico City Nocturnal Tour, Food and drinks

Student Flash Presentations

October 23rd · 10:00 AM

[+ Read more](#)

Health and Disease, Metabolism, Nervous System, Proteomics and Transcriptomics, Receptor Structure, Signaling and Activation Mechanism



Adgrg6/Gpr126 is Required for Myocardial Notch Activity and N-cadherin Localization to Attain Trabecular Identity

Abhishek Kumar Singh

Investigating The Role of ADGRB3 Loss of Expression in Brain Tumor Formation in Li-Fraumeni Syndrome

Alex Torrelli-Diljohn



GPR124 Mediates Adhesion Of Leukemic Stem Cells To Their Niche And Leads To Myeloid Skewing

Emmanouil Kyrloglou

A single cell GPCR map of thermogenic fat

Vasiliki Karagiannakou



GAIN Domain Dynamics And Its Relevance For Adhesion GPCR Signaling In Vivo

Lara-Sophie Brodmerkel

Novel isoforms of adhesion GPCR B1 (ADGRB1/BAI1) generated from an alternative promoter in intron 17

Rashed Rezwan Parag



Identification of Differentially Expressed Gpr116 (Adgrf5) Transcript Variants in Mouse Kidney

Hailey Steichen

Elucidating The Role Of GPR97/ADGRG3 In Neutrophil Biology

Tyler Bernadyn



Next Generation MBD2 inhibitors for Brain Cancer Therapy

Jesse Stillwell



Nicole Scholz

Leipzig University

Adhesion GPCR in Mechanobiology

About Nicole

"Group Leader (10/2016 – present)

Cellular Neuromechanics and Adhesion GPCR group

Rudolf Schönheimer Institute of Biochemistry,

Division of General Biochemistry, Faculty of Medicine, Leipzig University

Postdoctoral Researcher (12/2015 – 9/2016)

Institute of Physiology, Department of Neurophysiology, University of Würzburg

Neuroscience, Dr. rer. nat. (8/2010 – 12/2015)

University of Würzburg, Institute of Physiology, Department of Neurophysiology

Conferral date: Dec 2nd, 2015

Studies in Biology, Diplom Biology (10/2004 – 5/2010)

Institute of Physiology, Department of Neurophysiology, University of Würzburg"

Tethered agonist-dependent/independent activation mechanism in AGPCRs



Signaling Properties of ADGRL3

Signe Mathiasen

An ECR-Mediated and TA-independent Mechanism of aGPCR Activation: Direct Communication of Extracellular Region with Transmembrane Domain in a Holo-Adhesion GPCR

Demet Araç



Structural Insights into the Activation Mechanisms of Adhesion GPCRs

Yan Zhang

Heterogeneity of Tethered Agonist Signaling in Adhesion G Protein-Coupled Receptors

Andrew Dates



Discriminating between the extracellular scaffolding and G protein signaling roles of GPR56/ADGRG1 via the characterization of a non-cleavable point mutant knock-in mouse, H381S

Frank Kwarcinski

Tethered Peptide Activation Mechanism of Adhesion GPCRs

Peng Xiao



OCT 24

Oct 24 - 9:00 AM

Session II

AGPCR signaling pathways and trafficking

Yuling Feng · Monserrat Avila Zozaya · Erwin G. Van Meir · Pal Kasturi

10:30 AM

Coffee Break with light snacks

11:00 AM

Session III

Molecular tools and biosensors directed at AGPCR signaling and function

Stephanie Häfner · Laurent Sabbagh · Ana Lilia Moreno Salinas

12:00 PM

Session IV

AGPCRs signaling in the nervous system

Joseph Duman · Simeon R. Mihaylov · Anne Bormann

1:00 PM

Complimentary Lunch

2:00 PM

Posters

Caroline Formstone · Jianxiang Xue · Virginea de Araujo Farias · Anne Bormann · Szymon P. Kordon · Tingzhen Shen · Bill Huang · Júlia Rosell · Tobias Langenhan · Mao Chunyou · Mariam Melkumyan

3:00 PM

Session V

Structural mechanisms of AGPCR signaling and function

Fabian Pohl · Sumit Bandekar · Florian Seufert

4:00 PM

Dr. GPCR Community Presentation

Monserrat Avila Zozaya

4:30 PM

Board meeting/General assembly

5:30 PM

Leave for dinner reception

6:00 PM

Complimentary Reception dinner

Session II

October 24th · 9:00 AM

[+ Read more](#)

AGPCR signaling pathways and trafficking



Localization of putative ligands for adhesion G protein-coupled receptors in mouse tissues

Yuling Feng

The ADGRF5/GPR116 receptor is a key regulator of lymphatic endothelial cell identity and function

Monserrat Avila Zozaya



Adhesion GPCR BAI1/ADGRB1 can block IGF1R-mediated growth signalling, increase radiosensitivity and augment survival in medulloblastoma

Erwin G. Van Meir

Site Specific N-Glycosylation Of The N-Terminal Fragment Of ADGRG6 Drives Proteolytic Processing, Trafficking And Signalling

Pal Kasturi



Session III

October 24th · 11:00 AM

[+ Read more](#)

Molecular tools and biosensors directed at AGPCR signaling and function



The NTF Release Sensor Approach for Drug Discovery for Human Adhesion GPCRs

Stephanie Häfner

bioSens-All: A Multiparametric BRET-Based Platform for Comprehensive Profiling of adhesion GPCR Signaling and Pharmacology-Enabling Drug Discovery

Laurent Sabbagh



Characterizing hADGRE5/CD97 Activation and Signaling: A Mechanical Stimulation BRET-Based Approach (MS-BRET)

Ana Lilia Moreno Salinas

Session IV

October 24th · 12:00 PM

[+ Read more](#)

AGPCRs signaling in the nervous system



BAI1/ADGRB1-mediated Regulation of Mitochondrial Morphology in Axons

Joseph Duman

Bai1 Is A Novel Neuronal Substrate Of The Psychiatric Risk Kinase TNIK

Simeon R. Mihaylov



Intricacies Of Complex Assembly And Ligand Interaction In The Adhesion GPCR Latrophilin/Cir1

Anne Bormann

Posters

October 24th · 2:00 PM

+ Read more



Interrogating The Role Of CELSR1 (ADGRC1) In Breast Cancer

Caroline Formstone

Generation and characterization of collecting duct specific GPR56 knockout mice

Jianxiang Xue



Anti-Tumorigenic Role of Brain Angiogenesis Inhibitor 3 (BAI3) in WNT-Activated Medulloblastomas

Virginea de Araujo Farias



Intricacies Of Complex Assembly And Ligand Interaction In The Adhesion GPCR Latrophilin/Cirl

Anne Bormann



Conformational And Functional Coupling Between Extracellular and Transmembrane Regions of a Holo-Adhesion GPCR

Szymon P. Kordon



Deorphanization Of The Adhesion GPCRs GPR110 and GPR116

Tingzhen Shen



Self-Cleavage of GPR110 SEA Domain and Its Impact on GAIN Domain Autoproteolysis

Bill Huang



Tethered Agonist Dependent ADGRL3 Signaling Activity In The G12/13 Pathway

Júlia Rosell



The CELSR/ADGRC Homolog Flamingo Is Not Autoproteolytically Processed By The GAIN Domain

Tobias Langenhan



Structural Insights into the Activation Mechanisms of Adhesion GPCRs

Mao Chunyou



GPR110 modulates anxiety-like behaviors and memory function in mice potentially through neuronal and neuroimmune alterations during neurodevelopment

Mariam Melkumyan



Structural mechanisms of AGPCR signaling and function



Structural Determinants Of GAIN Domain Autoproteolysis And Cleavage Resistance Of Adhesion G Protein-Coupled Receptors

Fabian Pohl

Structural studies of the CELSR1 extracellular region reveal a compact multidomain module of fourteen domains which regulates signaling

Sumit Bandekar



Unveiling the GPS Cleavage Mechanism in ADGRL1 with QM/MM

Florian Seufert

Dr. GPCR Community Presentation

October 24th · 4:00 PM

[+ Read more](#)



Monserrat Avila-Zozaya

Dr.GPCR Volunteer

The Dr.GPCR Ecosystem platform aspires to provide opportunities to connect, grow, and thrive as a great GPCR Community.

About Monserrat

"My doctoral research was focused on investigating the cellular effects of missense lung cancer-mutations in the G-protein-coupled receptor Autoproteolysis-Inducing (GAIN) domain of Latrophilin 3 receptor under the mentorship of Dr. Antony Boucard.

I am currently a postdoctoral researcher fellow in Dr. Kathleen Caron's laboratory at UNC. My research focuses on understanding the molecular mechanisms of adhesion GPCRs (aGPCRs) in lymphatic endothelial cells (LECs), a cellular model with unique junction arrangements where aGPCRs are mainly unexplored."

OCT 25

Oct 25 - 9:00 AM

Session VI

AGPCRs shaping the nervous system

Yimin Zou · Dimitris Placantonakis

10:00 AM

Coffee Break with light snacks

10:30 AM

Session VII

Physiological and pathological roles of AGPCRs in the nervous system

Nicole Perry-Hauser · Beatriz Blanco Redondo · Willem Berend Post

12:30 PM

Complimentary Lunch

1:30 PM

Session VIII

Physiological and pathological roles of AGPCRs in the periphery

Tobias Langenhan · Anastasia Georgiadi · Douglas Tilley · Hee-Yong Kim · Alain Garcia De Las Bayonas · Gabriela Aust

3:30 PM

Coffee Break with pastries announcement of the aGEM award

4:00 PM

Session IX

Coming Soon

4:40 PM

Closing remarks

5:00 PM

Departure

Session VI

October 25th · 9:00 AM

[+ Read more](#)

AGPCRs shaping the nervous system

ADGRCs in glutamatergic synapse formation, maintenance and degeneration

Yimin Zou



Antibody-drug conjugates targeting CD97 in glioblastoma

Dimitris Placantonakis

Session VII

October 25th · 10:30 AM

[+ Read more](#)

Physiological and pathological roles of AGPCRs in the nervous system



Adhesion G protein-coupled receptor latrophilin-3 (ADGRL3) modulation of dopaminergic neurotransmission

Nicole Perry-Hauser

Uncovering the signaling pathway of the ADGRA homolog Remoulade in *Drosophila*

Beatriz Blanco Redondo



The Adhesion GPCR Latrophilin Interacts With The Notch Pathway To Control Germ Cell Proliferation

Willem Berend Post

Physiological and pathological roles of AGPCRs in the periphery



The CELSR/ADGRC Homolog Flamingo Is Not Autoproteolytically Processed By The GAIN Domain

Tobias Langenhan

Adhesion GPCR GPR116/Adgrf5 controls a lineage of anti-thermogenic adipocytes with implications for adaptive thermogenesis during prolonged cold exposure

Anastasia Georgiadi



ADGRF5-mediated regulation of cardiac health and disease

Douglas Tilley

Characterization of Phenotypes Associated with GPR110 Deletion

Hee-Yong Kim



The Adhesion GPCR Cupidon Regulates Mating In The Closest Relatives Of Animals

Alain Garcia De Las Bayonas

Critical role for CD97/ADGRE5 in the induction of allergic airway inflammation

Gabriela Aust

