

PROPOSED SPEAKERS FOR INRC 2019 SYMPOSIA

Symposium 1. *Opioid Receptor Structure/Ultra Structure/Single molecules*

Monday, July 8, 10:00am-12:30pm

Chair Meritxell Canals (University of Nottingham, UK)

Co-Chair Damien Jullie (University of California, San Francisco)

- 1) Mark von Zastrow
University of California, San Francisco
Subcellular locations of opioid receptor function

- 2) Seva Katritch
University of Southern California
Structural Pharmacology of Delta Opioid Receptor

- 3) Seksiri Arttamangkul
Oregon Health & Science University
Visualizing endogenous opioid receptors in living neurons using ligand-directed chemistry

- 4) Marta Filizola
Icahn School of Medicine at Mount Sinai
Understanding mu-opioid receptor activation and allosteric modulation via molecular dynamics simulations for the design of safer analgesics

- 5) Aashish Manglik
University of California, San Francisco
Traversing chemical space to understand opioid function

Symposium 2. *Biased Signaling*
Monday, July 8, 2:00pm-4:00pm

Chair Laura Bohn (Scripps Institute)

Co-chair TBD

- 1) Laura Bohn
Scripps Institute
Differential adaptations to chronic biased opioid administration in different neuronal populations

- 2) Andrea Kliewer
Jena University
Phosphorylation-deficient G-protein-biased μ -opioid receptors improve analgesia and diminish tolerance but worsen opioid side effects

- 3) Lee-Yuan Liu-Chen
Temple University
Differential adaptations in vivo following treatment with KOR biased agonists

- 4) Vanna Zachariou
Mount Sinai School of Medicine
Differential regulation of opioid receptors in different brain regions- the role of RGS proteins

- 5) Michelle Mazei-Robison
Michigan State University
Morphine-induced adaptations in VTA (transcription and protein phosphorylation)

6) Yavin Shaham

National Institute on Drug Abuse

Effect of chronic buprenorphine and the biased mu-opioid receptor agonist TRV130 on relapse to oxycodone seeking in a rat model of opioid maintenance therapy

Symposium 3. Albert Herz Memorial Lecture: Targeting Kappa Opioid Receptors

Tuesday, July 9, 10:00am-12:30pm

Chair: Eduardo Butelman (Rockefeller University)

Co-chair: to be picked

Fred Nyberg, Department of Pharmaceutical Biosciences, Uppsala University

Tribute in Memory of Albert Herz

- 1) Michael Bruchas
Washington University
Dissecting Nucleus Accumbens Opioid Circuits in Reward Seeking
- 2) Sara Jones
Wake Forest University
Kappa Opioid Receptors Drive Dopamine Deficiency and Dysphoria During Withdrawal from Alcohol, Cocaine and Heroin
- 3) Brian Reed
Rockefeller University
In Vivo Effects of Kappa Agonists with Differential In Vitro Efficacy
- 4) Tom Prisinzano
University of Kansas
Title TBD
- 5) Pierre-Eric Lutz
McGill University
Epigenetic Programming of the Kappa Opioid Receptor by Child Abuse: a Post-mortem Brain Study

**Symposium 4. Gavril Pasternak Memorial Lecture: Chemical
Biology of Diverse Opioids**
Tuesday, July 9, 2:00pm-4:00pm

Chair: Susruta Majumdar (Washington University)

Co-Chair: Nurulain Zaveri (Astraea Therapeutics)

Ying-Xing Pan, Department of Neurology and Molecular
Pharmacology Program, Memorial Sloan Kettering
Tribute in Memory of Gavril Pasternak

1) Susruta Majumdar

Center for Clinical Pharmacology, St Louis College of Pharmacy
and Washington University School of Medicine
Structure based design and synthesis of diverse opioids

2) Nurulain Zaveri

Astraea Therapeutics, LLC
*Bifunctional NOP/MOP agonists as a New Approach for Non-
addicting analgesics and Treatments for Opioid Use Disorders*

3) Ream Al-Hasani

Center for Clinical Pharmacology, St Louis College of Pharmacy
and Washington University School of Medicine
*Determining the neurochemical profile of endogenous opioids
during fentanyl withdrawal*

4) Saheem Zaidi

The Bridge Institute, USC Dornsife
*Designing bitopic opioids: Activity modulation in targeting sodium
binding pocket*

5) James Zadina

Tulane University School of Medicine

A mu opioid with substantially reduced side-effects shortens recovery from chronic pain relative to morphine

Symposium 5. *Circuits in Neuropathic Pain*
Wednesday, July 10, 10:00am-12:30pm

Chair Vivianne Tawfik (Stanford University)

Co-Chair Minoru Narita (Hoshi University)

- 1) Vivianne L. Tawfik
Stanford University
 μ -Opioid receptor signaling in glial cells

- 2) Minoru Narita
Hoshi University
Pain, stress and tumor progression

- 3) Gregory Corder
University of Pennsylvania
Pain & the amygdala

- 4) Ru-Rong Ji
Duke University Medical Center
Chronic pain and innate immune checkpoint system

- 5) Isaac Chiu
Harvard Medical School
Neuro-immune interactions in host defense against pathogens

- 6) Anna Taylor
University of Alberta
Microbiome, Pain & Addiction

Symposium 6. *Young Investigators Symposium - Endogenous Opioid Systems: Progress and New Concepts*

Thursday, July 11, 10:00am-12:30pm

Chair: *Emily Jutkiewicz* (University of Michigan)

- 1) Elena Bagley
University of Sydney

- 2) Cathy Cahill
University of California Los Angeles

- 3) Hervé Porvas
Pharmaleads SA

- 4) Leslie Sombers
North Carolina State University

- 5) David Hsu
Stony Brook University

Symposium 7. Atypical Opiates
Thursday, July 11, 2:00pm-4:00pm

Chair: Sandra Comer

Co-chair: Ellen Walker

- 1) Kim Vanover
Intra-cellular Therapies
ITI-333: A New Approach to the Treatment of Opioid Use Disorder
- 2) Jay Mclaughlin
University of Florida
Evaluation of Kratom and Mitagynine as Safer Treatments for Pain and Opioid Dependence
- 3) Jonathan Javitch
Columbia University
The Atypical Antidepressant Tianeptine is an Effective Mu Agonist
- 4) Ellen Walker
Temple University
Preclinical Assessment of Novel Psychoactive Substances: Opioids
- 5) S. Stevens Negus
Virginia Commonwealth University
Learning from Failure: Kappa Agonists as Negative Controls in Analgesic Drug Development
- 6) Joseph Stauffer
Nektar Therapeutics
NKTR-181: A Novel Pegylated Opioid in Development for the Treatment of Chronic Pain