

KEYSTONE SYMPOSIA

on Molecular and Cellular Biology

Somatosensation: From Detection to Perception (J8)

Scientific Organizers: Alexander Chesler, Sarah Ross and Daniel O'Connor

Supported by the Directors' Fund

Pain: Aligning the Target (J7)

Scientific Organizers: Laura M. Bohn, William K. Schmidt and Allan I. Basbaum

February 2-5, 2020 • Keystone Resort • Keystone, Colorado, USA

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Abstract & Scholarship Deadline: October 17, 2019 / Abstract Deadline: October 31, 2019 / Discounted Registration Deadline: December 4, 2019

SUNDAY, FEBRUARY 2

Arrival and Registration

MONDAY, FEBRUARY 3

Welcome and Keynote Address (J7)

Irene Tracey, University of Oxford, UK
Brain Imaging of Acute and Chronic Human Pain: From Cause to Perception

Molecules and Cells for Touch, Temperature and Pain (J8)

Ardem Patapoutian, The Scripps Research, USA
Molecules for Touch

Diana Bautista, University of California, Berkeley, USA
Signaling Mechanisms for Mechanosensation and Itch

Ellen A. Lumpkin, Columbia University, USA
The Epithelial and Neural Connections Mediating Touch

David Julius, University of California, San Francisco, USA
Ion Channels for Temperature and Pain Sensation

Short Talks Chosen from Abstracts

Learning from Our Patients (J7)

Christin Veasley, Chronic Pain Research Alliance, USA
A Pain Patient's Perspective on the Critical Need to Align the Target

Lauren Charlotte Heathcote, Stanford University, USA
Identifying Biobehavioral Markers in Pediatric Pain

Chas Bountra, University of Oxford, UK
Using Epigenetics to Discover New Pain Targets

Short Talks Chosen from Abstracts

NCCIH and BRAIN Funding Opportunities for Circuits Studies (J8)

Karen K. David, NINDS, National Institutes of Health, USA

Merav Sabri, NCCIH, National Institutes of Health, USA

Workshop (J8)

Short Talks Chosen from Abstracts

Spinal Cord (J8)

Patrik Ernfors, Karolinska Institutet, Sweden
The Cellular Basis for Somatosensation and Pain

Rebecca Seal, University of Pittsburgh, USA
Spinal Cord Interneurons Underlying Touch-Evoked Pain

David D. Ginty, HHMI/Harvard Medical School, USA
Spinal Cord Circuits for Touch

Short Talks Chosen from Abstracts

Developing More Informative Pain Models (J7)

Allan I. Basbaum, University of California, San Francisco, USA
Preclinical Brain Imaging of Pain Processing and its Regulation

Jose Moron-Concepcion, Washington University School of Medicine, USA

Dissecting the Neural Circuits Driving Pain-Induced Negative Affect

Annemieke Kavelaars, University of Texas MD Anderson Cancer Center, USA

Neuroimmune Function in Chronic Pain and Therapeutic Opportunities

Short Talks Chosen from Abstracts

Poster Session 1

TUESDAY, FEBRUARY 4

Subcortical Circuits (J8)

Sarah Ross, University of Pittsburgh, USA
Neural Circuits for Itch

Alexander Chesler, National Institutes of Health, USA
Supraspinal Circuits Controlling Sensory Responses

Yarimar Carrasquillo, National Institutes of Health, USA
Neural Circuits for Bidirectional Modulation of Pain in the Amygdala

Fan Wang, Duke University Medical Center, USA
Subcortical Circuits for Somatosensation

Short Talks Chosen from Abstracts

New Tech for Managing Pain (J7)

Robert W. Gereau, Washington University Pain Center, USA
Optogenetic Silencing of Nociceptors

Speaker to be Announced

Speaker to be Announced

William K. Schmidt, Helixmith Co., Ltd, Seoul, South Korea, and San Diego, USA

Development of Advanced DNA Therapeutic, VM202

Short Talks Chosen from Abstracts

Panel Discussion: Inclusivity and Diversity in the Field: What Works and How to Do Better (J8)

NIH HEAL Initiative and Efforts (J7)

Amir Tamiz, National Institute of Neurological Disorders and Stroke, USA

Internal States (J8)

Richard D. Palmiter, HHMI/University of Washington, USA
Parabrachial CGRP-Expressing Neurons Establish and Maintain Threat Memories

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Jan Siemens, University of Heidelberg, Germany
Deep Brain vs. Ambient Temperature Detection: Who Has the Say in Thermoregulation?

Yuki Oka, California Institute of Technology, USA
Neural Mechanisms of Body Fluid Regulation

Short Talks Chosen from Abstracts

New Approaches to Modulating Known Targets (J7)

Wendy L. Imlach, Monash University, Australia
Talk Title to be Announced

Laura M. Bohn, The Scripps Research Institute, USA
Using Biased Agonism to Refine Pain Therapeutics

Venetia Zachariou, Icahn School of Medicine at Mount Sinai, USA
The "Complex" Role of RGS Proteins in Chronic Pain and Opioid Analgesia

Short Talks Chosen from Abstracts

Poster Session 2

WEDNESDAY, FEBRUARY 5

Somatosensory Cortex (J8)

Carl Petersen, École Polytechnique Fédérale de Lausanne, Switzerland
Neural Circuits for Goal-Directed Sensorimotor Transformation

Soohyun Lee, NIMH, National Institutes of Health, USA
Organizational Principles of the Somatosensory Cortex

Daniel O'Connor, Johns Hopkins University, USA
Neural Circuit Dynamics Underlying Touch Perception

James Poulet, Max-Delbrück-Centrum für Molekulare Medizin, Germany
Encoding Temperature in the Cortex

Short Talks Chosen from Abstracts

New Targets (J7)

Nikita Gamper, University of Leeds, UK
GABAergic Signaling within Dorsal Root Ganglia

Gregory Scherrer, University of North Carolina, USA
Neural Circuits for Pain Unpleasantness

Daniela Salvemini, Saint Louis University, USA
Adenosine Receptors Modulating Neuropathic Pain

Arthur Christopoulos, Monash University, Australia
Allosteric GPCR Modulators in Pain States: Sculpting Structure to Tune Function

Short Talks Chosen from Abstracts

Cortical Processes for Somatosensation (J8)

Michael Brecht, Bernstein Center for Computational Neuroscience, Germany
Encoding Touch, Tickle and Sex

Alison L. Barth, Carnegie Mellon University, USA
The Role of the Insular Cortex in Temperature Perception

Sliman J. Bensmaia, University of Chicago, USA
The Neural Basis of Touch and Proprioception in Non-Human Primates

Short Talk Chosen from Abstracts

Cannabis for Managing Pain? (J7)

Speaker to be Announced

Andrea Hohmann, Indiana University, USA
CB2 Cannabinoid Receptor as a Therapeutic Target

David Shurtleff, NCCIH, National Institutes of Health, USA
Natural Products for the Treatment of Chronic Pain

Short Talks Chosen from Abstracts

Meeting Wrap-Up: Outcomes and Future Directions (Organizers) (J8)

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THURSDAY, FEBRUARY 6

Departure

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