



Frontiers of Serotonin Beyond the Brain

November 12–15, 2017 | Doubletree by Hilton | Park City, Utah | USA

Scientific Organizers:

Fusun Kilic, University of Arkansas Medical School, USA

Michael D. Gershon, Columbia University, USA

Luc Maroteaux, UMR-S 839 INSERM / UPMC, France

Serotonin is a multi-functional signaling molecule that plays extra-cerebral roles, not only in adult life, but in development as well. Although research concerning extra-cerebral serotonin is growing rapidly and interest in the subject is great, the physiological control and underlying molecular processes, as well as the involvement of peripheral serotonin in disease, have not been definitively established. Furthermore, the role of serotonin in peripheral tissues has been neglected and under-represented at current meetings, which have focused on the 3-5% of the body's serotonin that is present in the central nervous system. Therefore, this Keystone Symposia conference aims to reveal insights into the role of serotonin in peripheral tissues, specifically in the diagnosis, prevention and treatment of many diseases, which is long overdue.

Session Topics:

- Serotonin, a Major Peripheral Neurohormone
- Serotonin in a Drug Target
- Serotonin in the Circulatory System
- Serotonin Receptors in Cardiovascular and Pulmonary Functions
- Peripheral Serotonin in Relation to Brain Function and Development
- Serotonin in Diseases

**Abstracts can still be submitted for short talk consideration through September 11, 2017
and for poster presentation through October 1, 2017**

Discounted Registration Deadline: September 12, 2017



Note: Scholarships are available for graduate students and postdoctoral fellows and are awarded based on the abstract submitted. Submitting an abstract is an excellent opportunity to gain exposure for your work. Abstracts submitted by the abstract deadline will also be considered for short talks on the program.

Meeting Hashtag: #KSserotonin
www.keystonesymposia.org/17T5

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Abstract & Scholarship Deadline: July 11, 2017 / Abstract Deadline: August 10, 2017 / Discounted Registration Deadline: September 12, 2017

SUNDAY, NOVEMBER 12

Arrival and Registration

MONDAY, NOVEMBER 13

Welcome and Keynote Address

***Fusun Kilic**, University of Arkansas Medical School, USA

Michael D. Gershon, Columbia University, USA
Serotonergic Regulation of Enteric Neurogenesis

Serotonin, a Major Peripheral Neurohormone

***Fusun Kilic**, University of Arkansas Medical School, USA

Elaine Y. Hsiao, University of California, Los Angeles, USA
Indigenous Bacteria from the Gut Microbiota Regulate Host Serotonin Biosynthesis

Gary M. Mawe, University of Vermont, USA
Mucosal Serotonin Signaling in the Gut: Changes in Disease and Therapeutic Targets

Nick J. Spencer, Flinders University, Australia
Is There a Role for Mucosal Serotonin in the Generation of Neurogenic Motor Patterns in the Gut Wall?

Supriya Srinivasan, The Scripps Research Institute, USA
*Short Talk: Serotonergic Orchestration of Energy Balance: Translating Insights and New Pathways from *Caenorhabditis elegans**

Natalia Alenina, Max Delbrück Center for Molecular Medicine, Germany
Short Talk: Reevaluation of Serotonin Synthesis Pathways: Phenylalanine Hydroxylase as an Alternative Source of Peripheral Serotonin

Serotonin in a New Drug Target

***Michael D. Gershon**, Columbia University, USA

Gerard Karsenty, Columbia University Medical Center, USA
Serotonin in a New Drug Target

Pablo Lapuerta, Lexicon Pharmaceuticals, Inc., USA
Tryptophan Hydroxylase Inhibitors for Carcinoid Syndrome

Michael Bader, Max Delbrück Center for Molecular Medicine, Germany
Peripheral Serotonin, a New Drug Target

Mari Lilith Lund, University of Copenhagen, Denmark
Short Talk: Serotonin-Producing Enterochromaffin Cells Are a Major Target for GLP-1 in the Gastrointestinal Tract

Poster Session 1

TUESDAY, NOVEMBER 14

Keynote Address

***Laurent Monassier**, Université de Strasbourg, France

Stephanie Wengert Watts, Michigan State University, USA
5-HT and Blood Pressure: Knowing and Learning

Serotonin in the Circulatory System

***Laurent Monassier**, Université de Strasbourg, France

Francine Côté, Institut Imagine INSERM U1163, France
Bone Marrow-Derived Serotonin Regulates Expansion of Red Blood Cell Progenitors

Harvey J. Kliman, Yale University, USA

The Serotonin Highway in the Human Placenta: Serotonin Transport from Mother to Fetus

Fusun Kilic, University of Arkansas Medical School, USA
Cigarette Smoking-Associated Alterations in Serotonin/Adrenalin Signaling Pathways of Platelets

Yahan Liu, Peking University Health Science Center, China
Short Talk: 5-HT_{2B}R Promoted Vascular Restenosis via β -arrestin2-mTOR/p70S6K Pathway

Serotonin Receptors in Cardiovascular and Pulmonary Functions

***Stephanie Wengert Watts**, Michigan State University, USA

Laurent Monassier, Université de Strasbourg, France
Heart Disease and Valvulopathy

Luc Maroteaux, UMR-S 839 INSERM / UPMC, France
Serotonin Receptor Signaling in Development

Kevin Currie, Cooper Medical School of Rowan University, USA
Peripheral Serotonin and Control of the Sympathoadrenal Stress Response

Kartik Balachandran, University of Arkansas, USA
Short Talk: Role of Elevated Serotonin in Altered Aortic Valve Contractility and Remodeling

WEDNESDAY, NOVEMBER 15

Peripheral Serotonin in Relation to Brain Function and Development

***Luc Maroteaux**, UMR-S 839 INSERM / UPMC, France

Kara Gross Margolis, NewYork-Presbyterian Morgan Stanley Children's Hospital, USA
The Involvement of Peripheral Serotonin in Autism

Randy Blakely, Florida Atlantic University, USA
Keeping the Periphery in Mind: Peripheral Inflammatory Modulation of Behavior Mediated by CNS Serotonin

Alexandre Bonnin, University of Southern California, USA
Prenatal Exposures and Placental Serotonin: a Pathway for the Fetal Programming of Mental Disorders

Hail Kim, Korea Advanced Institute of Science and Technology, South Korea
Regulation of Systemic Energy Homeostasis by Peripheral Serotonin

Evan Deneris[†], Case Western University, USA
Short Talk: Pet-1 Controls Peripheral Serotonin Synthesis

Jeremy M. Veenstra-VanderWeele, Columbia University and New York State Psychiatric Institute, USA
Short Talk: Maternal Whole Blood Serotonin Levels Are Associated with Cognitive Ability and Core Symptoms in Children with Autism Spectrum Disorder

Serotonin in Diseases

***Michael Bader**, Max Delbrück Center for Molecular Medicine, Germany

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Joanne Wang, University of Washington, USA

Serotonin Transporter Deficiency Drives Estrogen-Dependent Obesity and Glucose Intolerance

Robin L. Haynes, Children's Hospital Boston, USA

High Levels of Serum Serotonin in Sudden Infant Death Syndrome

Terence Keith Smith, University of Nevada School of Medicine, USA

Does Neuronal Serotonin Have a Role in Colonic Motor Patterns?

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

THURSDAY, NOVEMBER 16

Departure