

OptoDBS 2019

Campus Biotech Geneva, June 20-22, 2019

Thursday June 20, 2019

Session 1 : **New Methods and developments**

13 :15 – Introduction **Christian Lüscher**

13 :20 – 14:10 **Ed Boyden** Tools for Observing and Controlling Neural Circuits
Keynote

14 :10 – 14 :40 **Ofer Yizhar** Optogenetic dissection of prefrontal pathways for cognitive function and social behavior

14 :40 – 15 :10 **Garret Stuber** Paraventricular Thalamic Circuit Dynamics for Cue-Reward Processing

15 :10 – 15 :40 **Andreas Horn** Toward Connectomic Deep Brain Stimulation

15 :40 – 17 :00 *Coffee break and poster session*

17 :00 – 17 :20 **Christina Grimm** Opto-fMRI on the brain-wide effects of direct and indirect pathway activation

17 :20 – 18:10 **Botond Roska** Targeting human neuronal cell types for optogenetic repair
Keynote

Speaker's dinner

Friday June 21, 2019

Session 2 : **Motor systems**

08 :30 – 09 :00 *Welcome with drinks and croissants*

09 :00 – 09 :30 **Mark Bevan** Dysregulation and dysfunction of the indirect pathway in mouse movement disorder models

09 :30 – 10 :00 **Alexandra Nelson** Optical Assessment of Neural Activity in a Mouse Model of STN DBS for Parkinson's Disease

10 :00 – 10 :30 **Adam Kepecs** Structured and cell-type-specific encoding of decision variables in orbitofrontal cortex

10 :30 – 11 :00 *Coffee break*

11 :00 – 11 :30 **Rui Costa** Discovering, reinforcing and refining actions

11 :30 – 12 :00 **Nicolas Mallet** What goes wrong in Basal Ganglia neuronal circuits during Parkinsonism?

12 :00 – 12 :30 **Raffaella Tonini** The input-specific nature of compartmentalized serotonergic signal at striatal circuits

12 :30 – 14 :00

Lunch and poster session

Session 3 : DBS in neurology and psychiatry

14 :00 – 14:50
Keynote

Helen Mayberg

In The Trenches Balancing Progress and Setbacks with DBS for Depression

14 :50 – 15 :20

Renana Eitan

Ventral Subthalamic Theta-Alpha Oscillations Define Emotional and Cognitive Areas in Parkinson's and OCD Patients

15 :20 – 15 :50

Hemmings Wu

Shedding light on action mechanisms of accumbal electrical stimulation for impulsivity

15 :50 – 16 :20

Jens Volkmann

New stimulation tools and strategies in DBS

16 :20 – 16 :50

Coffee break

16 :50 – 17 :20

Christian Lüscher

The therapeutic implications of a circuit model for addiction

17 :20 – 17 :40

Uma Mohan

The effects of direct brain stimulation in humans depend on frequency and location

17 :40 – 18 :10

Valerie Voon

Electrophysiological markers of addiction processes from deep brain stimulation studies

20 :30

OptoDBS after dinner party at the Buvette des Bains des Pâquis

Saturday June 22, 2019

Session 4 : DBS in psychiatry

08 :30 – 09 :00

Welcome with drinks and croissants

09 :00 – 09 :30

Camilla Bellone

Neural mechanisms of conspecific interaction

09 :30 – 09 :50

Colin McNamara

Phase-dependent closed-loop modulation of network oscillations *in vivo*

09 :50 – 10 :10

Daniel Côté

DBS guidance with optical fibers

10 :10 – 10 :30

James Trevathan

Calcium imaging via a miniature microscope for studying deep brain stimulation in a freely moving animal model of disease

10 :30 – 11:20
Keynote

Antonello Bonci

Crossing the translational bridge: from optogenetics to brain stimulation approaches as promising treatments against addictive disorders

11 :20

Closing remarks

11 :30

Light Farewell apéro