CAN-ACN SATELLITE SYMPOSIUM BY THE CANADIAN NEUROPHOTONICS PLATFORM

A satellite meeting of the 14\textsuperscript{th} Annual Canadian Neuroscience Meeting
August 26\textsuperscript{th}, 2021
Zoom link: will be provided to registrants

Note: All times refer to Eastern Daylight Time (EDT)

**Thematics of the 2021 edition:** New avenues pursued by the Canadian Neurophotonics Platform/Optogenetics & Vectorology Foundry

11:00 WELCOME: Yves de Koninck (CERVO Brain Research Center, Université Laval)

**SESSION 1: Invertebrates and lower vertebrates.**

Chair: Ed Ruthazer

11:10 **Antoine Légaré and Vincent Boily** (Paul De Koninck’s lab, Université Laval)
*Whole brain Ca\textsuperscript{2+} imaging in the zebrafish*

11:40 **Tomoko Ohyama** (McGill University)
*Optogenetic and connectome approaches for mapping of small brain circuit*

12:10 **LUNCH BREAK**

**SESSION 2: Human cells & tissue**

Chair: Reza Sharif

13:15 **Tom Durcan’s lab, MNI, McGill University**

Nguyen-Vi Mohamed: *Microfabricated disk technology: rapid scale up in midbrain organoid generation*

Ghislaine Deyab: *Characterizing Patterns of Neural Activity in Midbrain Organoids as a Model for Parkinson's Disease*

13:45 **Pierre Marquet** (Université Laval)

*Digital Holographic Microscopy: a high-speed label-free technique to resolve neuronal network activity*
14:15  COFFEE BREAK

SESSION 3: Rodents (slice work and whole-animal)
Chair: Paul De Koninck
14:45  Stephanie Borgland (Hotchkiss Brain Institute, Calgary)
Optogenetic stimulation of lateral hypothalamic orexin inputs to the VTA activate dopamine neurons in a circuit-specific manner to drive reward-seeking
15:15  Jean-Claude Béique (U. Ottawa)
Integrated computational, electrophysiological and optical frameworks to study synaptic and network dynamics

15:45  SHORT BREAK

SESSION 4: Non-human primates and human disease models
Chair: Martin Parent
16:00  Keith Murai’s lab (RI-MUHC, McGill University)
Jean-Bastien Bott: Calcium imaging: From mice to non-human primates
Keith Murai: Imaging Astrocytes in Marmosets
16:30  Marja Sepers and Ellen Koch (Lynn Raymond’s lab, UBC)
Using in vivo optogenetic sensors to elucidate cortico-striatal dysfunction in mouse models of Huntington’s Disease
17:00  SHORT BREAK

PANEL DISCUSSION (10 min each followed by discussion): Open science
Chair: Yves De Koninck
17:15  Adrien Peyrache (McGill University)
NWB pipeline for mini-scope data
17:25  Jeffrey LeDue (University of British Columbia)
Enabling Collaborative Neuroscience Research: the UBC Dynamic Brain Circuit cluster’s Databinge forum

17:35  Marie-Eve Paquet (Université Laval)

Viral vectors – Discovering novel AAVs in the context of Open science

17:45  Ted Fon (The Neuro - McGill)

Open Science as a Mission Enabler at The Neuro

17:55  Panel Discussion

18:45  Networking events
(1 breakout room per session)

20:00  CLOSING REMARKS: Yves De Koninck

Thanks to our sponsors!