

**CAN-ACN SATELLITE SYMPOSIUM BY THE CANADIAN NEUROPHOTONICS
PLATFORM**

A satellite meeting of the 14th Annual Canadian Neuroscience Meeting

August 26th, 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 Ca²⁺ 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**

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