CAN 2026 Satellite Workshop Proposal

Title: Cells in Space: A Hands-On Journey Through Spatial Transcriptomics

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Description: Understanding how molecular identities shape cell types and function across brain regions relies on technologies that bridge spatial and transcriptomic information at single-cell resolution. With transformative technology such as spatial transcriptomics, researchers can now map the expression of hundreds to thousands of genes directly onto tissue sections while preserving spatial context. Such novel technologies offer an unprecedented insight into the brain's cell-type organization, function, disease states, developmental trajectories and more. The *Cells in Space* satellite symposium will highlight recent advances from experts in the field and provide a hands-on workshop introducing workflows for analyzing and visualizing spatial transcriptomics data. The workshop will focus on data acquired using Xenium technology with possibility to expand to other platforms. Through guided tutorials, participants will explore **(1) data processing** (e.g. dimensionality reduction, clustering, merging vs integrating datasets)**, (2) data visualization** and **(3) integration with single-cell RNA-seq data** to inform cell types. The workshop will use test datasets and preloaded analysis software on participants' own laptops, guided by experienced spatial transcriptomics users. **Target audience:** This workshop is designed for graduate students, postdoctoral researchers, and principal investigators in neuroscience who have an interest in big data and spatial transcriptomics analysis. Participants of all experience levels, including beginners exploring workflows to those with prior coding or analysis background, are welcome.

Program Schedule	
Time	
9:00-9:15	Mingle and coffee (provided)
9:15-9:30	Welcome remarks
9:30-9:45	Introduction to Spatial Transcriptomics
9:45-11:30	Trainee Talks (*coffee break 10:45-11:00*)
11:30-12:00	Keynote Speaker (Dr Keri Martinowich, Johns Hopkins University)
12:00-13:00	Lunch (provided for parallel workshop participants)
13:00-15:50	**Parallel Workshops** 1. Guided walk-through (Github) for new users 2. Analyses support and discussion for advanced users
15:50-16:00	Closing Remarks

Date: May 18, 2026
Location: Montreal Neurological Institute, McGill University
Estimated Attendance: 30-50 participants for workshop, >200 for presentations
Registration Deadline: Participant must register before TBD
Food and Beverage: Coffee, snacks, and lunch will be provided.
Registration Fee and link: Free; Registration is required. Link TBD.