

REALISE the News – November 2020

Hello HBI trainees! We hope you are enjoying the fall and your semester is going well. Read on to learn about several opportunities to support your academic, technical, and professional development. If you have any ideas for workshops or other learning opportunities you think would benefit HBI trainees, [we would love to hear from you!](#)

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MEET YOUR HBITO EXECUTIVES

Dion Kelly, Vice President HBITO

Written by Shane Nicholls and Charmaine Szalay-Anderson



Dion Kelly is the vice president of the Hotchkiss Brain Institute Trainee Organization (HBITO). She was born and raised in Elora, Ontario, and pursued a Bachelor of Medical Sciences (BMSc) with a double major in physiology and pharmacology at Western University. Currently, she is a third year PhD student in the neuroscience program under the supervision of Dr. Adam Kirton at the Alberta Children's Hospital. She is also a Vanier Scholar.

After completing her undergraduate degree, Dion's passion for adventure led her to Canmore where she spent a year hiking and snowboarding in the Rocky Mountains. She was drawn to Calgary in pursuit of her interest in medical innovation, where she completed a Master of Biomedical Technology (MBT) degree.

With a strong interest in advanced neurotechnologies, Dion's PhD projects are focused on establishing and optimizing brain-computer interface (BCI) technology for children with severe neurological disabilities. Amidst the COVID-19 pandemic, she has since adapted her project to provide a home-based program for families using a personalized BCI package, allowing them to continue using the technology without needing to come into the hospital.

After her successful tenure as the 2019/2020 HBITO social director, she ran for HBITO vice president with an interest in taking on new duties such as managing funding, finances, and investing for the HBITO. She also hopes to host seminars for trainees that go beyond their academic training involving themes such as industry and entrepreneurship. In her role, Dion is working to champion her larger goals of promoting inclusivity, diversity and innovation within the HBI, particularly through upcoming fundraising campaigns to bring awareness to the health-related disparities faced by racial and ethnic minorities in Canada.

Outside of Dion's academic involvement, she thoroughly enjoys the outdoors and is an avid traveller, with dreams to explore a new country each year.

See [HBITO - About Us](#) for more information and follow the HBITO/REALISE Instagram account at [@hbitouc](#). Stay tuned for more HBITO executive team bios, courtesy of the [Science Writers Journal Club](#), in future REALISE newsletters.

UPCOMING HBI REALISE MODULES

Introduction to MRI Physics

October 14 to December 9 | Biweekly on Wednesdays from 10 am to 12 pm

This interactive workshop will provide participants with an intuitive, yet accurate, understanding of how an MRI scanner works. Participants will learn about the fundamental physics behind MRI, explore how common image types are acquired, and discuss common issues with MRI images. Attendees will gain a strong understanding of MRI scanners and images, along with common pitfalls and how to account for them.

You are welcome to sign up for the remaining three sessions in this series. Check with the instructor about missed content.

Modern Approaches to Optogenetics and Behavioural Neuroscience

November 16 & 18 | 10 to 11:50 am

Learn how to effectively incorporate optogenetics and behavioural analysis into your research. Lectures will cover the basics and general principles guiding optogenetics and rodent behavioural testing and analysis. Participants will learn about classic and modern approaches for behavioural and statistical data analysis. An emphasis will be placed on ensuring proper controls are in place to ensure that reliable, high quality data are produced.

An Introduction to MATLAB for Optogenetics and Behavioural Neuroscience

November 23 & 25 | 2 to 3:50 pm

This module will introduce computer coding in MATLAB with a focus on basic principles and practical applications for optogenetics and behavioural neuroscience. Participants will be given an introduction on how to navigate the MATLAB environment and effectively code in MATLAB. Upon completion of the course, trainees will have the necessary skills to incorporate MATLAB scripts into their own research.

Recording Extracellular Electrophysiological Signals in the Brain

November 30 | 10 to 11:50 am & December 2 | 11 am to 12:50 pm

Learn how to incorporate extracellular electrophysiological recordings in animals into your research project. Lectures will cover the principles that guide recording simultaneously from multiple sites in the brain and the interpretation of those signals, with a focus on recording action potential firing from single neurons. An emphasis will be placed on the technical considerations required to extract stable, high quality recordings in mice and rats.

OTHER UCALGARY WORKSHOPS AND EVENTS

Grad Writing Community

November 2 to December 10 | Weekly on Mondays from 1 to 4 pm

Join the Graduate Writing Community to share a supportive virtual space with others while writing. Increase your writing productivity and add structure to your writing sessions by setting a writing goal. Receive feedback from writing tutors and connect with other students in this virtual space.

Building Career Resilience in a Constantly Evolving World (graduate students)

November 3 | 2 to 3:30 pm

In today's world, it is increasingly important to build career resilience—the ability to thrive in one's career in the midst of a rapidly changing career landscape. In this workshop, you will learn how to cultivate career resilience through actions that foster a growth mindset and life-work balance.

[Writing at the graduate level series: Critical thinking and scholarly writing](#)

November 5 | 4:30 to 6 pm

Learn about the structure of academic argumentation through claims, evidence and warrants. This workshop will explore critical thinking themes that form the blueprint for all academic writing, including critiquing a position based on context/point of view, strength of evidence, flaws in reasoning, and underlying assumptions.

[Crafting Abstracts that Connect with your Audience](#)

November 10 | 4 to 5 pm

Abstracts can be challenging to write, especially when you have a limited word count. At this workshop, you will learn more about the differences between technical and general abstracts, and how to craft them to gain the attention of your specific audience.

[Writing at the graduate level series: Developing research proposals](#)

November 10 | 4 to 5:30 pm

Learn strategies to develop appropriate research questions, conceptualize information on a topic, and select a project scope that matches your timeframe. While noting differences across disciplines, this workshop discusses strategies students can use to begin the planning and drafting of a research proposal.

[How to Search for a Transformative Talent Internship Bootcamp](#)

November 13 | 9 am to 12 pm

Interested in pursuing an internship in your graduate program but unsure of how to find these opportunities? Discover strategies for connecting with employers remotely, eligibility requirements and securing the perfect Transformative Talent Internship.

[HBI Town Hall](#)

November 18 | 1 to 2 pm

Join HBI Director Dr. David Park and the HBI leadership team for updates on HBI Education, Commercialization, and the Brain and Mental Health research strategy. Learn more about the institute's exciting initiatives in innovation, including the Computational Neuroscience platform, and a get sneak peek of a significant new HBI research prize.

[Virtual Networking Event](#)

November 18 | 4 to 6 pm

Put your networking skills and interview strategies to the test! In this online event, you can chat one-on-one with recruiters from tech, commerce and more. They'll be sharing insight on recruitment processes and current and upcoming career opportunities.

[Unwritten rules: Understanding business culture and career transitions \(graduate students\)](#)

November 24 | 12 to 1:30 pm

All organizations have expectations about how you should behave in the workplace; these are often implied rather than stated. In this workshop, we will explore how to understand and effectively navigate business culture through appropriate professional communication, conflict management, and workplace interpersonal relationships.

[Writing at the graduate level series: Strategies for writing graduate scholarships and other applications](#)

November 25 | 3 to 4:30 pm

Learn strategies for writing statements of purpose, statements of intent, and other documents typically associated with scholarship and program applications. This workshop highlights potential idea and organization strategies. The last part of the workshop focuses on perception management, particularly issues of style and tone.

Mitacs: Practice Your Presentation Skills I

November 27 | 9 am to 5 pm

In this one-day course, theory is introduced in short bursts and participants spend the majority of time practicing their presentation skills while receiving expert feedback. The focus on extensive practice and feedback is what makes the program meaningful, and is what makes the learning stick.

Writing at the graduate level series: Revising for sentence level errors

November 30 | 4:30 to 6 pm

Most students review, rewrite, and edit their documents. This workshop will help students structure their revision process to become more effective at revising their documents. The workshop addresses various writing processes to help students become attuned to where they are most likely to make mistakes.

Neuro Nexus Demo Day

November 30 | 4:30 to 9:30 pm

Rapid-fire pitches, inspiring demonstrations, and a growing health innovation community - here is where it all comes together! On Demo Day, multidisciplinary innovator teams will present functional prototypes designed and built over the 6 previous weeks in competition for \$50,000 in awards, including seed funding, internships, incubator memberships, and professional services offered by our sponsors and community partners.
