

REALISE *the News* – September 2019

WELCOME BACK!

We hope you had a fabulous summer and are ready for another fantastic year at the HBI! Read on to learn about some of the modules we have planned for the next few weeks, and stay tuned for future REALISE Newsletters. As always, please feel free to contact us at realise@ucalgary.ca, or drop by HSC 2025 anytime.

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BRYAN KOLB LECTURE/WELCOME BACK WINE & CHEESE RECEPTION

Don't forget to sign up for the [Annual Bryan Kolb Lecture in Behavioural Neuroscience](#) scheduled for **Friday, September 6, 3:30 to 4:30 pm**. This year's keynote speaker is [Dr. Bita Moghaddam](#) who will speak on "*Action selection and action encoding in anxiety.*" The HBI Welcome Back Wine & Cheese Reception will follow in the HRIC Atrium.

RSVP as soon as possible at: <https://kolblecture2019.eventbrite.ca>

MEET YOUR HBITO EXECUTIVES

Brandon Craig, President, HBITO

Written by Pauline de Jesus



Brandon Craig is the president of the Hotchkiss Brain Institute Trainee Organization (HBITO). He is a Vanier Scholar and MD/PhD candidate in the Neuroscience Program under the supervision of Dr. Adam Kirton in the Calgary Pediatric Stroke Program.

Brandon began his neuroscience research during his undergraduate degree at MacEwan University, where he obtained a BSc Honours in Psychology. Under the direction of professors from three different universities, he studied stroke recovery in the context of brain stimulation and neuroimaging. This led him to pursue graduate school at the University of Calgary, where all three of these domains are housed under one institution. In his current research, he aims to understand how the structural connectivity in the brain is affected in children who have had a stroke at or around birth using advanced neuroimaging techniques. Eventually, Brandon hopes to establish his own lab focused on using multimodal imaging to understand various neurodevelopmental disorders.

Within the HBITO, Brandon is responsible for overseeing the HBITO Executive Committee. This year, he hopes to engage donor participation at HBI events, as well as to facilitate interaction between all three campuses. For the past few semesters, Brandon is one of the first faces to offer a warm welcome to incoming neuroscience students. His infamous “dad jokes” always put students at ease. Brandon believes this kind of connection is important for building lifelong friendships within the program. Outside of the HBITO and graduate school, Brandon is a hockey player and lover — who previously worked for the Edmonton Oilers as a statistician and skill development coach.

Learn more about the HBITO at <https://hbito.ucalgary.ca/>

UPCOMING HBI REALISE MODULES

To register for upcoming modules, sign in to the [REALISE Intranet site](#) with your UCIT username and password

Neuro 0 Module Series

This module series is designed with incoming graduate students in mind, however, registration is open to all HBI trainees interested in a refresher on one or more of the module topics.

Neuro 0 - Introduction to Neuroscience Research Methods

September 10 | 11:30 am to 1:20 pm

This module will review research tools and techniques commonly used to investigate cellular and molecular signaling and neurodevelopment. These are techniques covered in the Fall graduate neuroscience course. Among others, this includes calcium imaging, FRET/BRET imaging, immunohistochemistry, Western Blot, PCR, CRISPR, optogenetics, and the CRE-Lox system.

Neuro 0 - Introduction to Critical Analysis of Scientific Literature

September 12 | 11 to 11: 50 am

This module will be an interactive session introducing students to the process of critically analyzing scientific literature. During this hour, students will participate in various exercises to effectively identify key pieces of information that will allow them to engage in meaningful discussion. Literature review is a principal component of the Neuro I and II courses and this module will familiarize students with the basic skills required.

Neuro 0 - Introduction to Electrophysiology

September 13 | 11 am to 12:50 pm

This module will orient trainees to the basic foundational concepts of electrophysiology and its uses in research. Different laboratory techniques will be discussed to give the student a hands-on introduction to electrophysiology.

Introduction to Entrepreneurship

September 17 | 10 am to noon

In this module, participants will learn the essentials of entrepreneurial thinking and entrepreneurship. They will learn about why, in today’s economy, entrepreneurial thinking and entrepreneurship are

relevant to every student regardless of their field of studies. The concept of entrepreneurship does not just include the fundamentals of starting a new venture, but rather, it involves expanding our understanding of the importance of creativity and being opportunity oriented, innovative, and proactive.

Presented in partnership with the Hunter Hub. Coffee and snacks will be provided!

Modern Approaches to Optogenetics and Behavioural Neuroscience

September 30 and October 2 | 10 to 11:50 am

This module will provide an introduction to Optogenetics and Behavioural Neuroscience with a focus on basic principles and practical applications. Participants will be given an introduction as to how to effectively incorporate optogenetics and behavioural analysis into their research. Lectures will cover the basics and general principles guiding optogenetics and rodent behavioural testing and analysis. Participants will also become familiar with classic and more 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.

Career Conversation with Sarah Hewitt

October 4 | 1:30 – 2:30 pm

Join [Sarah Hewitt](#) and the Science Writing Journal Club to hear about Sarah's journey from neuroscience PhD grad to adventure scientist, writer, photographer, and professor! Sarah is a neuroscience and physiology professor at Mount Royal University. She is also a self-proclaimed adventure scientist - a role she makes up as she goes along. She wants to go everywhere and learn everything, from visiting labs in the rainforest and the Arctic, to looking for wood frogs in Alberta's boreal forest or chasing spider monkeys in Belize. *Coffee and snacks will be provided!*

An Introduction to MATLAB for Optogenetics and Behavioural Neuroscience

October 7 and 9 | 10 – 11:50 am

This module will introduce computer coding in MATLAB with a focus on basic principles and practical applications with respect to Optogenetics and Behavioural Neuroscience. Participants will be given an introduction as to how to navigate the MATLAB environment and effectively code in MATLAB. An emphasis will be placed on practical MATLAB experience using real data. Participants are required to bring their own laptop with MATLAB.

OTHER UCALGARY WORKSHOPS, EVENTS, AND SEMINARS

[Graduate Science Education New Student Orientation](#)

September 4 | 8:30 am – 4 pm

[Innovation@UCalgary Fair](#)

September 5 | 10 am – 3 pm

[Equity, Diversity and Inclusion in NSERC and other grant applications](#)

September 5 | 1 – 2:30 pm

[HBI Seminar Series](#)

Fridays at noon

[2019 Summer Innovation Showcase](#)

September 10 | 5 – 8 pm

[Run for Little Ones](#)

September 15

[Science in the Cinema: Girl Rising](#)

September 18 | 6:30 pm