

Building **innovative** companies  
with a **purpose**

# McGill Neuroscience LEAN STARTUP Program

**McGILL**  
**DOBSON CENTRE**  
FOR ENTREPRENEURSHIP

In Partnership  
with:



**HEALTHY BRAINS**  
**HEALTHY LIVES**



The McGill Dobson Centre is proud to be creating partnerships across the McGill community with the mission to support and accelerate emerging innovation and scientific discovery through the development of entrepreneurship.

We are delighted to partner with Healthy Brains, Healthy Lives (HBHL) to offer our Lean Startup program which has been specifically adapted for neuroscience researchers and trainees.

HBHL aims to accelerate translational discoveries and create a global centre of excellence in neuroinformatics at McGill University. HBHL builds on McGill's scientific excellence and global leadership in areas of neuroscience that hold great promise for delivering implementable, clinically effective outcomes in brain and mental health. To promote innovation and entrepreneurship in neuroscience, HBHL funds and relies on the expertise of [NeuroSphere](#), McGill's neuroscience innovation accelerator.

The maturation and the acceleration of neuro-innovations developed at McGill ultimately require the creation of a dynamic entrepreneurship ecosystem in neuroscience. To do this, NeuroSphere is actively developing strategies to foster a culture of innovation. NeuroSphere is very proud to partner with the [McGill Dobson Centre for Entrepreneurship](#).



**Krystle van Hoof**  
**Managing Director and CEO of**  
**Healthy Brains, Healthy Lives**

“NeuroSphere and Healthy Brains, Healthy Lives are very excited to launch the McGill Neuroscience Innovation and Entrepreneurship Program in collaboration with the Dobson Centre. This initiative will offer practical training to the McGill neuroscience community.”



**Marie Josée Lamothe**  
**Academic Director of McGill**  
**Dobson Centre For**  
**Entrepreneurship**

“The Dobson Centre is thrilled to welcome the McGill neuroscience community to our startup ecosystem, and to support and accelerate neuroscience innovation through the development of entrepreneurship”

# Program at a Glance

## Turning scientific ideas into startups

The McGill Neuroscience Innovation and Entrepreneurship Program is a **tailored learning approach intended specifically for scientific researchers**. It is designed to help take you from the **idea stage** to **developing** and **launching** a **viable startup**, while **immersing** you into **entrepreneurship ecosystem**.

Through informative workshops, mentoring and advising sessions with industry and subject matter experts, as well as self-directed work on *your* go-to-

market strategy, you will gain exposure to business frameworks and tools to evaluate your idea and generate challenging, yet feasible goals for your startup. You will also acquire a general understanding of key business concepts needed to bring your vision to life.

By the end of the program, you will have the business acumen, the confidence and the clarity to present your idea to various stakeholders and take your business to the next stage.



# Program Overview

**Target Date:** September 22 – October 13, 2020

**Duration:** 4 weeks - workshops every Tuesday from 6 – 9 PM

## Key Learning Themes

### Lean Startup Turning An Idea Into A Business

- Why some startups fail and others succeed: stages, pitfalls and best-practices
- Protecting your IP
- Validating a proof of concept
- The framework to creating a viable product
- Building a business plan

## Format

- **ACTION LEARNING:** Throughout the program, participants work with their teams on achieving milestones related to their startup idea. This process is a crucial component of the program and will ultimately lead to the development of a viable startup concept.
- **WEEKLY WORKSHOPS:** The central platform for introducing strategic frameworks and business concepts that guide the process of turning an idea into a business. Workshops also provide the opportunity to bridge theory with real-world application through stories, examples and insights from guest speakers. Workshops will generally last 2 hours but we reserve an extra hour for guest speakers and mentors.

Guiding question & learning progression	Presentation approach
What is it and why should I care?	Brief interactive lecture
How does it work?	In-depth discussion of case study, stories or other examples
How can I use it within my startup?	Discussion on applying frameworks & concepts to each startup, followed by Q&A discussion

- **ONE-ON-ONE MENTORSHIP AND COACHING:** startups address challenges specific to their business model with selected industry experts.

# Lean Startup Course Plan

## Pre-Program:

Participant needs assessment survey

Week	Workshop	Action-Learning Project
1	<b>Why Some Startups Fail And Others Succeed</b> <ul style="list-style-type: none"> <li>• Program introduction and overview</li> <li>• Understanding the cycles and stages of a startup</li> <li>• Overcoming prevailing challenges and avoiding common pitfalls</li> <li>• Best-practices – drawing from lean methodology to improve the odds</li> <li>• IP for drug discovery and medical technology</li> </ul>	<b>Market Outreach:</b> <ul style="list-style-type: none"> <li>• Talking to your target market or potential partners to learn what they really want</li> </ul>
2	<b>Validating A Proof Of Concept</b> <ul style="list-style-type: none"> <li>• What is proof of concept and why you need it?</li> <li>• Using value proposition design to:               <ul style="list-style-type: none"> <li>• Validate the need</li> <li>• Address customer pain points</li> <li>• Conceptualize a solution/prototype</li> <li>• Seek feedback and testing</li> </ul> </li> </ul>	<b>Value Proposition Design:</b> <ul style="list-style-type: none"> <li>• Defining what problems you will solve and how you will do it</li> </ul>
3	<b>The Framework To Creating A Viable Product</b> <ul style="list-style-type: none"> <li>• The purpose of a minimum viable product (MVP)</li> <li>• Criteria for building and testing your MVP</li> </ul>	<b>Minimum Viable Product:</b> <ul style="list-style-type: none"> <li>• Developing/defining the features of your MVP and roadmap for early stage testing and feedback</li> </ul>
4	<b>Building A Business Plan</b> <ul style="list-style-type: none"> <li>• Moving from concept to operating a viable business – identifying the key building blocks</li> <li>• Roadmap for the future</li> <li>• Putting together an attractive business plan to present to stakeholders</li> </ul>	<b>Business Model Generation:</b> <ul style="list-style-type: none"> <li>• Articulating your business' infrastructure, offerings, customers, revenue streams and more</li> </ul>

## Post-Program:

Review/mentorship on business plan

# Speakers

In Order of Appearance

## Michael Mee



Michael Mee is Principal at Amplitude Ventures. After completing an undergraduate degree in engineering at McGill Michael he moved to Boston to pursue doctoral studies in George Church's lab at Harvard Medical School, where he was bit by the "entrepreneur's bug" at the tail end of his PhD and launched a company, Syncrobes, focused on translating the technology he was advancing to improve the gut health of livestock animals. Growing that company provided him opportunities to interact with the Boston VC community and ultimately led to an offer to join one of the premiere life science focused venture creation firms, Flagship Pioneering, where he spent the second half of my decade in Boston. His time at Flagship was focused on conceiving, strategizing and ultimately building very early stage companies. More specifically he was focused on the development of two microbiome companies in the agricultural (Indigo) and therapeutics (Kaleido) domains, co-founding and launching a new therapeutic delivery platform and gene therapy company (Cobalt Biomedicine/Sana Biotechnologies) and most recently developing new ventures in AI-based drug development and gene editing areas. A long-term goal of his has always been to bring his learnings in Boston back home to help contribute to the Canadian biotech ecosystem. To that end, he has recently relocated to Montreal to help launch a new Canadian focused life science and health technologies venture capital fund, Amplitude Ventures, and is excited to be able to achieve this goal with the support of the stellar team he works with.

## Olivia Novac



As Associate Director for Technology Transfer at McGill University, Olivia Novac is responsible for the assessment and management of the IP generated at McGill, including patent filing, technology licensing and supporting spinoff companies. She is also the Canadian representative for the Association of University Technology Managers (AUTM). Before joining McGill, Ms. Novac spent six years in the biotechnology industry, where she held various positions focusing on intellectual property and business development. She holds a Ph.D. in Biochemistry: DNA replication from McGill University.

# Speakers

In Order of Appearance

## Dylan Wade Roskams-Edris



In his role as Open Science Alliance Officer for TOSI and The Neuro, Dylan interfaces with the national and global open science communities to promote the uptake of open science tools and practices in Canadian neuroscience research. His background studying neuroscience, health ethics, and law gives him the breadth of expertise needed to recognize the critical challenges that face open neuroscience and open innovation, and promote the solutions necessary to overcome them.

## Claude Macdonald



Claude is the founding president of Talentuum. Over the last 26 years he has trained more than 30,000 managers, professionals and employees from major organizations across Canada, the United States, Europe and Asia. Claude is a certified business coach (Registered Corporate Coach), a certified Professional from the ROI Institute (CRP), and is also a faculty member of the McGill Executive Institute. Fluent in both French and English, he has designed several tools, workshops and training programs offered by TALENTUUM. His areas of expertise are customer success, sales leadership, sales management & B2B consultative selling.

## Jean-Philippe Sicard



Jean-Philippe is the CEO and Co-founder of Ton Équipier, a company specializing in the marketing of technological and innovative products and solutions. With a background in automated production engineering, Jean-Philippe discovered a strong entrepreneurial passion over the course of his career experiences. After spending five years as a project engineer for a large automation engineering consulting firm, he decided to change his career path to pursue sales, marketing and business development. In 2015, he joined Tekinno Corporation as VP Sales and Marketing where he grew their Eagleview products in North America, before co-founding Ton Équipier in 2017.

# Speakers

In Order of Appearance

## Philippe Séguéla



Dr. Philippe Séguéla, PhD is Full Professor of neuroscience in the department of Neurology & Neurosurgery of McGill University. Trained in France, Canada and the US, his world-renowned research is funded by CIHR, NSERC and private foundations. His work has been primarily focused on ion channels and receptors contributing to neuronal hyperexcitability in pain circuits. His lab located at the Montreal Neurological Institute uses a multidisciplinary approach based on state-of-the-art molecular biology, electrophysiology, pharmacology, transgenic mouse models, optogenetics, chemogenetics, calcium imaging and quantitative behavioural sensory assays to investigate key pathophysiological mechanisms in peripheral and central pain pathways. The long-term goal of Dr. Séguéla's team and collaborators is to understand the cellular basis for the somatosensory syndroms observed in chronic pain patients, as a way to establish a solid rationale for the much-needed development of effective analgesic therapies without the side effects of opiates. Pr. Séguéla has active collaborations and consulting roles with international pharmas as well as local biotechs. He is also the scientific founder of two neurobiotech companies: Antalium-NeuroCeptor (1999) and Neurasic Therapeutics (2020).

## Stuart Kozlick



Stuart is a Strategic Advisor, Executive-In-Residence within the Emerging Technology & Startup practice at Fasken Martineau DuMoulin LLP. Stuart also serves as Professor of Practice in McGill University's Faculty of Medicine, Department of Surgery, and as Faculty Lecturer in the university's Faculty of Engineering, Department of Mechanical Engineering. In 2019, Stuart became CEO of Puzzle Medical Devices Inc. Previously, Stuart held executive positions at Medical Robotics, Kinova Robotics Inc., CAE Healthcare, Medtronic Inc., and the former CryoCath Technologies Inc. He is passionate about early stage ventures and opportunities that require market analysis, needs assessment, product and business model discovery and definition, corporate strategic positioning and planning, and go-to-market execution. Stuart continues to support the growing medtech ecosystem of Montreal through various board positions and in an Advisory/Mentor capacity for entities such as L'institut TransMedTech, CTS Santé, RTI Inc., and TechStars Montreal AI, to name a few.

# Program Participants

## 8 Bit Cortex

We are creating an app that uses gamified micro-tests to measure changes in cognition, mood, and health behaviors over time to automate the psychiatric assessment process and expand its scope to be more informative for clinician treatment planning, through brief and repeated micro-assessments about momentary experiences.

Team:

**Viviana Romero**, Alumni Faculty of Science (Psychology), Currently in the School of Continuing Studies (Applied Marketing)

**Katy Celina Sandoval**, PhD candidate in Neuroscience, McMaster University, and Graduate Certificate in Knowledge Mobilization at Bishop's University

**Ty McKinney**, Research Director for the BranchOut Neurological Foundation and Phd candidate in Cognitive Neuroscience

**Valentyna Maslieieva**, co-founder and customer experience advisor for 8 Bit Cortex

**Eden Redman**, web developer and database engineer

**Araz Minhas**, and game developer

## ARC (*Activities for Reading Comprehension*)

ARC is a tablet-based application that focused on the strengths and intense interest in word reading of preschoolers with Autism Spectrum Disorder and Hyperlexia as a means to support their challenges in reading comprehension.

Team:

**Dianne Macdonald**, PhD5 student Educational and Counselling Psychology - Human Development

## C-BIG repository

C-Big repository is an open-science neuroscience bio-repository. One of the functions of this project is to generate novel iPSC cell lines from patients with human disease with known genetic alterations for use in industry and academic research.

Team:

**Jason Karamchandani**, Associate Professor Faculty of Medicine

# Program Participants

## **MBrainBio**

With the discovery of the Yamanaka factors in 2006, the ability to generate an induced pluripotent stem cell (iPSC) from the blood of any individual. Building on these discoveries, brain organoid technology emerged in 2013 from the work of Madeline Lancaster and with these seminal discoveries, these 3D neuronal structures have been used to model brain disorders, develop treatments against Zika virus, and with the most recent use in modelling COVID-19. Yet, issues with the methods have limited their widespread use, from high variability between organoids, to high costs in generating brain organoids. Often, researchers and companies lack the means to make these organoids at levels needed for drug discovery purposes, and this is the gap MBrainBio seeks to fill. Our aim for MBrainBio is to ameliorate the organoid production process, making it robust, consistent and scalable, to levels where organoids can be provided to users across the life science sectors for testing a given therapeutic related to disorders of the brain.

Team:

**Thomas Durcan**, Assistant Professor and Associate Director of The Neuro's Early Drug Discovery Unit (EDDU)

**Nguyen-Vi Mohamed**, Postdoctoral fellow, Montreal Neurological Institute

**Kristiana Salmon**, National Programs Coordinator, Montreal Neurological Institute

## **Nurau inc.**

Nurau is the new version of Neuropresse, the first French-language journal dedicated to mental health in Quebec, which was created in 2017. In 3 years of activity, Neuropresse has more than 10,000 views and has collected hundreds of testimonials. The mission always remains to inspire, entertain and educate our audience around mental health and wellness, as well as to combat the stigma that surrounds them.

Team:

**Justin Lessard-Wajcer**, Medical Researcher and Vanier Scholar at McGill University

# Program Application

## Ideal Participant Profile

This program is for **McGill-affiliated researchers and trainees** that have been working on an **idea, discovery or prototype** - ideally for 3 months or more, that are looking to **legitimize their concept** and move **towards launching a startup**.

- You or your team has at least one founder that is a McGill University student, faculty member or staff member.
- You or your team has at least one technical co-founder, and can build your business upon a technology, science, or idea that is significantly or radically disruptive.
- The project must be aligned with one of [HBHL's research themes](#)

**A commitment towards attending all the workshops and executing the project work is required.**

Candidates must **apply [online](#) by August 30, 2020.**

