

# Brainnovations

Newsletter – Issue 14



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# A Frame of Mind

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## Adapting to New Normals through Neurotechnology

By: Tom Mikkelsen, President & Scientific Director

We take brain health for granted. We tend not to think about it until something changes and a once simple task becomes difficult. Remember when you incurred a sports injury and were on bed rest for a few weeks; the time when you were feeling low and struggled to reach out to one of your friends or family members; or imagine you tapping your feet to your favourite song and not being able to stop after. While most of us may recover and return to our former ability, 1 in 3 people affected by a brain disorder live with these challenges.

**CONTINUE READING...**

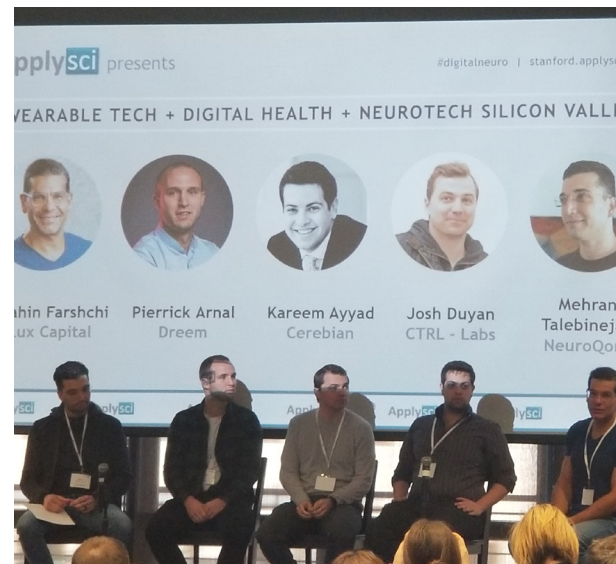


# OBI Portfolio Companies at ApplySci Conference

A delegation of OBI portfolio companies attended the **Wearable Tech + Digital Health + NeuroTech Silicon Valley 2019 conference** at Stanford University on February 21-22. The founders of the OBI portfolio company delegation – **Cerebian, Curv, NeuroQore** and **Winterlight Labs** – were featured on panels discussing the current challenges and potential avenues for startups and neurotechnology to develop into a robust industry.

Curated by ApplySci, this conference attracts world-class researchers and innovators in neuroscience, neurotechnology and digital health to address the intersection of technology and healthcare.

OBI's portfolio companies had the opportunity to showcase the strength of Ontario's neurotechnology industry, as well as reach potential investors to bring their products to the market.



## OUTPUTS



**Recognition of  
OBI Model**



**Partnerships**

## METRICS

**Presence  
of 4 OBI  
Portfolio  
Companies**

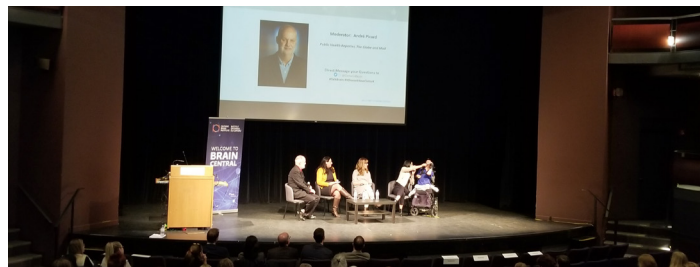
**200+  
Attendees**

# OBI Public Talk: Pain in Children

On April 23, OBI Public Talks opened up a conversation on **Pain in Children**, a frequently unaddressed issue. Though there has been increasing discussion and research on pain, there is a disconnect between what we know about pain and how it is managed in children, especially kids with disabilities.

Misconceptions around pain puts children at a greater risk of receiving inadequate pain relief. Dr. Christine Chambers (Scientific Director, **Solutions for Kids in Pain**) shared her work in engaging parents through sharing evidence-based pain management practices. Dr. Darcy Fehlings (Principal Investigator, **CP-NET**, and Senior Clinical Scientist, **Holland Bloorview Kids Rehabilitation**) discussed the latest research in managing pain in children with disabilities. Julian, born with a severe form of cerebral palsy, and mother Donna Cappelli shared their experience as a patient and caregiver living with the constant struggle of pain.

The Q&A session at the talk was moderated by André Picard, health reporter at The Globe and Mail. For more details, read TVO article [here](#).



## OUTPUTS



Access to Information



Media Coverage



Partnerships

## METRICS

**155**  
Attendees

**138**  
Views Online

Twitter Reach of  
**2,449,295**  
Trending Worldwide

#talkbrain  
#itdoesnthavetohurt

# Tom Mikkelsen on The Agenda

## OUTPUTS



Media Coverage



Recognition of  
OBI Model

Tom Mikkelsen, President & Scientific Director at OBI was invited on [The Agenda](#), January 7, to talk about the changing landscape of neurological research in Ontario. Dr. Mikkelsen discussed how advances in neuroscience are leading to a transformation in the study and treatment of brain disorders with a focus on the genetics rather than existing diagnostic labels. This transformation can be accelerated through the collection and the use of standardized data across disease groups.



Dr. Evdokia Anagnostou, Principal Investigator at the [POND Network](#) (OBI's neurodevelopmental disorders research program), also spoke on the program as part of a panel on neurodevelopmental disorders. She discussed

how patient and community engagement to research will allow researchers to develop more effective treatments and address community priorities. A recent example of this approach is the [10 research priorities](#) identified by OBI's Neurodevelopmental Priority Setting Partnership (PSP), in collaboration with the POND Network and the [James Lind Alliance](#).

To read more about the PSP and how POND is addressing these priorities, visit [OBI's blog](#) and [our website](#).

# Stories From Our Roots at The Chiefs of Ontario Annual Health Forum

Stories From Our Roots is a Photovoice project driven by First Nations youth. It's a form of life promotion that uses photography to tell stories of hope, to help safeguard against the growing rates of suicide among First Nations youth in Ontario.

The third workshop as part of the Photovoice project was held February 4-8 in London, ON, in partnership with [TakingITGlobal](#) (an international organization supporting youth empowerment and engagement).

Around 35 youth from over 20 First Nations across Ontario participated in the training.

Participants from the OBI-partnered Stories From Our Roots workshops were present at the Chiefs of Ontario Annual Health Forum on February 28. The youth had the opportunity to share their experience on becoming leaders through these workshops, as well as the future benefits their training will provide to their communities.



## OUTPUTS



Partnerships



Evidence-Informed  
Community-Based  
Interventions

## METRICS

**5**

First Nations  
Youth Presented

## OBI GEEK: Recipients Announced

OBI recently announced the first recipients of **GEEK (Growing Expertise in Evaluation and Knowledge Translation)** funding. OBI has committed \$300,000 to the first cohort of community-led organizations which aim to improve the quality of life for people living with brain disorders. The recipients – **Active Lives After School, Ontario Brain Injury Association, and Christian Horizons** – all provide a unique service for people living with brain disorders outside the clinical setting.

These programs will receive funding over the next two years, as well as support in evaluation to help with their sustainability, scale or spread to improve the availability of evidence-based community care.



## Brain Awareness Week

In collaboration with **THEMUSEUM** in Kitchener, OBI launched the **#BrainHealth Brain Awareness Week contest** March 11-17 to promote the importance of physical activity in relation to optimal neural functioning. Participants had the opportunity to share how they keep their brains healthy through physical activity by posting photos on social media with the hashtag **#BrainHealth**.

The contest complimented the **BRAIN: The World Inside Your Head**, exhibition at **THEMUSEUM** exhibited sponsored by OBI. The exhibition is housed at the museum until September 8, 2019.

### OUTPUTS



Partnerships



# CAN-BIND & ONDRI Family and Friends Days

ONDRI and CAN-BIND (OBI's neurodegenerative disorders and depression research programs, respectively) recently hosted Family and Friends Days. These days provide an opportunity for patients and researchers in the programs to interact and learn more about program activities and the impact of patient engagement on research. This year marked ONDRI's first Family and Friends Day and year four for CAN-BIND. In addition to providing an opportunity to share research updates, these events incorporated a variety of workshops and talks covering evidence-supported activities and treatments that promote brain health in people living with neurodegenerative disorders and depression.



## METRICS

**108** Attendees for CAN-BIND

**103** Attendees for ONDRI

## OUTPUTS



Improved Diagnostics, Interventions and Treatments



Access to Information

# EpLink Public Talk: Addressing Stigma Towards Epilepsy

EpLink, OBI's epilepsy research program, hosted "Moving Beyond the Myths: A Conversation on Epilepsy and Stigma" on March 18. This public talk focused on different perspectives on stigma towards epilepsy, how to address it and resources for support. Speakers included neurologist Dr. Melissa Efros (Johns Hopkins University), community epilepsy educator and Secretary General for the International Bureau for Epilepsy, Mary Secco, and Donovan Mckenzie and Cheryl Mendes, ambassadors from Epilepsy Toronto.

After the presentations, the audience had an opportunity to engage speakers in a Q&A discussion, furthering the dialogue on experiences with stigma and discuss improvements such as clinician referrals to epilepsy agencies.



## METRICS

**30**  
Attendees

## OUTPUTS



Access to Information



Partnerships



# Nurturing Ontario Talent: Interns at OBI

OBI recognizes the need to develop future management talent to sustain the growth of neuroscience research and neurotechnology in Ontario. To accomplish this, OBI launched its internship program to develop highly-qualified personnel (HQP) through post-graduate experiential learning opportunities. This latest round of interns will receive training and mentorship serving four key areas of OBI – research management, neuroinformatics, knowledge translation & outreach – to help them launch their careers while supporting Ontario’s neuroscience ecosystem.

## Meet OBI’s Interns:



### **Negar Mohammadi:**

A Clinical Neuroscience graduate, Negar has experience working within the clinic with epilepsy patients and in the neurotech sphere. A strong advocate for student entrepreneurs, she is excited to facilitate the development of neurotechnology from idea to commercialization to impact lives of people living with brain disorders.



### **Heena Cheema:**

As a Health Informatics graduate from University of Waterloo, Heena is passionate about using data to bridge gaps between knowledge and treatment to improve patient outcomes. She is excited to work with the Brain-CODE team to assist with informatics and analytics that support the data sharing process.



### **Gustavo Scola:**

Gustavo holds a Ph.D. in Biotechnology and mental illness and is working with the Research Programs at OBI. He is interested in how we can integrate and translate research into effective healthcare solutions that improve the lives of people with brain disorders.



### **Rachel Chepesiuk:**

A graduate of the University of Toronto double majoring in Cognitive Science and Semiotics & Communication Theory, Rachel aspires to learn how best to translate research into effective knowledge and practices that improve the health and well-being of the public.

OUTPUTS



**Experienced  
HQPs**

## Aurora and EpLink Study Announcement

In collaboration with Aurora Cannabis subsidiary, **MedReleaf**, **EpLink** recently **announced** the launch of a clinical study investigating whether cannabidiol (CBD) plus a low dose of tetrahydro-cannabinol (THC) reduces the amount of motor seizures in adults with drug-resistant epilepsy. This study will address the need for high-quality clinical evidence on the use of medical cannabis for people with epilepsy, particularly for those whose seizures do not respond to medications. Additionally, this study will also seek to understand the relation of genetics, different epilepsy syndromes, and their response to treatment with medical cannabis.



The study is led by Dr. Peter Tai, a neurologist at Toronto Western Hospital, in collaboration with Dr. W. McIntyre Burnham, Co-Director of EpLink, and Dr. Seyed Mirsattari of London Health Sciences Centre.

For more information on this and other epilepsy clinical trials, please visit [website](#) for more information.

OUTPUTS



**Clinical Trials**



**Collaborative Partnerships**

## Clinical Trials Workshop

On March 25, OBI organized an interactive Clinical Trials Workshop providing an opportunity for researchers, clinicians and partners of OBI's Integrated Discovery Programs (IDPs) to share their experience running rigorous clinical trials.

This workshop featured a keynote by Dr. Peter Jüni (**St. Michael's Hospital**) discussing pragmatic trials, their uses and challenges for implementation. Several panels covered lessons learned and trade-offs in running rigorous clinical trials, how to improve the success of trials through partnerships, and available supports services for clinicians. The workshop provided an opportunity to share knowledge to improve the rigour of brain-related clinical trials for greater value and impact.

OUTPUTS



**Advancing Knowledge**

# OBI ONtrepeneurs: Innovation Competitions Sweep



On March 27 [EpiNeuron Technologies](#) took home the top prize at [Innovation Factory's](#) sixth annual [Synapse Life Science Competition](#) at McMaster University in Hamilton, winning \$25,000 with an additional \$5,000 in consulting services from Shift Health, and a 1-year membership with Life Sciences Ontario. Over the competition's three-month period, teams received training in the commercialization and de-risking of medical devices to further develop their product and attract future investors.

[Nanology Labs](#), one of OBI's 2018 ONtrepeneurs, won the \$25,000 [RBC Prize for Innovation and Entrepreneurship](#) in the Later Stage category. The prize was awarded at the True Blue Expo held at MaRS, the final showcase of the University of Toronto Entrepreneurship Week. Nanology Labs' founder Mohammad Ali Amini will continue to validate and scale up the production of his prototype, a contrast agent that improves cancer patients' outcomes by enhancing the detection of early-stage tumors in MRIs as well as increase their responsiveness to radiation therapy.



As part of the [NFL's 1<sup>st</sup> and Future competition](#) on February 2, [TopSpin](#) won the Innovations to Advance Athlete Health and Safety Competition, earning \$50,000 to continue development of TopSpin360. The competition, hosted at the Georgia Institute of Technology, attracted entrepreneurs working to develop innovative solutions promoting the health, safety and performance of football players.

## OUTPUTS



**\$ Leveraged**

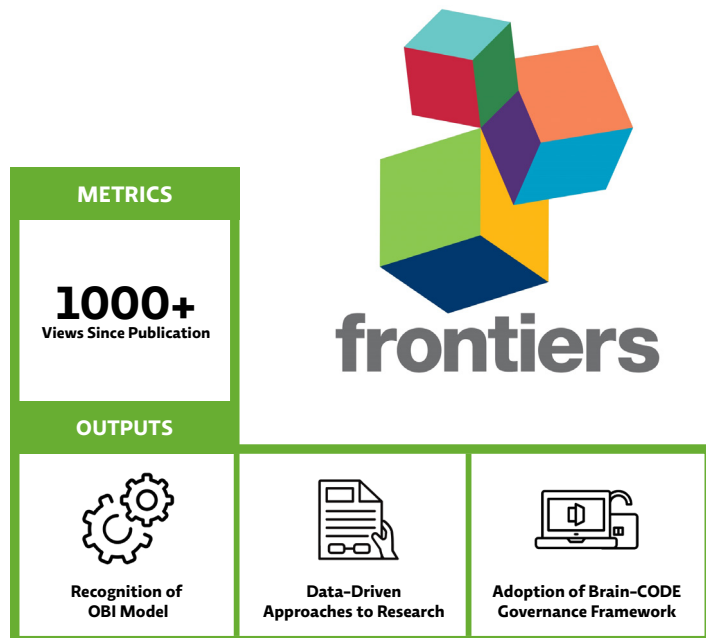


**Media Coverage**

## Brain-CODE in Frontiers in Genetics

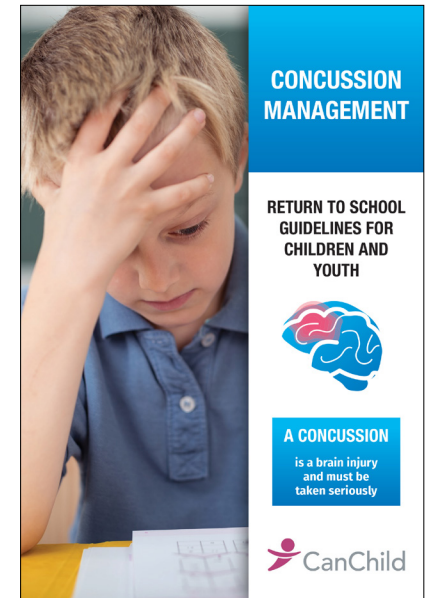
OBI and members of the [Indoc Consortium](#) recently published an [article](#) in the journal [Frontiers in Genetics](#) on [Brain-CODE](#), OBI's neuroinformatics platform, outlining 9 key concepts used in the development of its governance framework. This platform, designed to support large-scale collaboration, allows researchers from over 40 research institutions across Canada to share and analyze data. Brain-CODE has rigorous privacy and security policies built into its foundation, earning it the designation of "Privacy by Design" ambassador.

In describing these best practices in governance, this article serves as a resource for the development of similar large-scale data platforms supporting scientific collaboration.



## CanChild Concussion Management Guidelines

CanChild, a partner with OBI, launched the updated versions of the [Return to Activity \(RTA\)](#) and [Return to School \(RTS\)](#) in March. These guidelines were updated using the latest evidence following the [Berlin Consensus Statement of Concussion \(2017\)](#), systematic reviews, and results from CanChild's Back to Play study. As individuals may vary in their recovery, these guidelines provide concise and clear advice on the management of concussions in children. This is important for the prevention of prolonged symptoms and subsequent concussions during recovery.



# Integrating Neuroinformatics in Research and Industry Workshop 2019

On March 25, OBI co-organized the *Integrating Neuroinformatics in Research and Industry* workshop with the *International Neuroinformatics Coordinating Facility (INCF)* and *NeuroTech X*. This one-day workshop provided an opportunity to explore the advantages and barriers to bridging neuroscience research and industry in order to encourage scientific collaboration, such as sharing data, to accelerate advances in neurotechnology and brain health.

Senior leaders from OBI including President & Scientific Director, Tom Mikkelsen and Garth Smith, OBI's Vice President, Business Development & Partnerships, participated in panels and discussions with other leaders including April Khademi (Ryerson University), Karen Milligan (Ryerson University), Donna Shukaris (University of Toronto), as well as industry keynote speakers such as Matthew Collingridge (Digital & Solutions GEHC Canada), Brian Bot (Sage Bionetworks), and Gary Hasey (Digital Medical Experts Inc.).



# OBI Co-Sponsorship of Health Innovation Week at MaRS

Supported by OBI, MaRS Health hosted the sixth annual *Health Innovation Week* from April 1-5. Combining industry and health, this week long event brought together innovators and investors looking to develop solutions for healthcare system. On Monday April 1, Garth Smith, OBI Vice President, Business Development & Partnerships, participated in a panel discussion covering how innovators can engage healthcare organizations to bring their products into the system and improve health outcomes. OBI ONtrepeneur, *RetiSpec* also participated in the panel to provide an innovator's perspective.



OUTPUTS

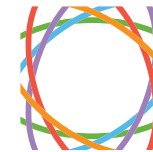


**Partnerships**



# In The News

- [New app offers support for mental health caregivers](#)
- [Age-Well competition for startups addressing aging sector, caregivers](#)
- [Labatt family donates \\$20-million to U of T for depression research](#)
- [What we don't know about children's pain can hurt them](#)
- [SickKids team discovers overconnected brain cells may cause autism](#)
- [Hawk's Nest Healthtech Pitch Competition Returns November 22](#)
- [Five Wellbeing Trends Businesses Should Look Out For in 2019](#)
- [MaRs' Top Tech Sector Predictions for 2019](#)
- [Digging DEEP](#)



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## NeuroTech Ontario Showcase

**June 20th, 2019**

5pm – 9pm

**THEMUSEUM**

10 King Street West, Kitchener



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