

Brainnovations

Issue 23



ONTARIO
BRAIN
INSTITUTE

INSTITUT
ONTARIEN
DU CERVEAU

A Frame of Mind

Growing and Learning

By: Tom Mikkelsen, President & Scientific Director

The brain has a remarkable ability to adapt to new information. This is what allows us to learn. OBI is no different, and like the brain, we too adapt to new information and learn from experience. Since inception, our goal, to make Ontario a world leader in brain research, commercialization, and care, has remained consistent. We aim to create positive change by supporting the innovations in brain health that will improve people's lives. Funding science with impact has always been our top priority.

So how close are we to achieving this goal and what have we learned?

CONTINUE READING...



Brain-CODE: Enabling Open Science

[Brain-CODE](#), OBI's secure neuroinformatics platform allows researchers to store, manage, share, and analyze the many different types of data collected through OBI's six Integrated Discovery Programs.

The platform was developed to enable collaboration and data sharing amongst scientists, clinicians, and industry and to speed up the pace of research and innovation with the goal of advancing research that will improve brain health.

The map below highlights the worldwide interest and usage of Brain-CODE as the platform of choice to access brain research data. Check out the current [open and controlled data releases](#).



| | |
|--|---|
| Requests | 237 |
| Country Identifiable Requestors | 50 Canada 17 USA 33 Rest of the World |
| Institutions | 60 Academic Institutions 10 Healthcare Facilities 6 Companies |

Canada

- Ontario
- Quebec
- Alberta
- British Columbia

World

- USA
- Australia
- China
- India
- Bangladesh
- Tanzania
- Japan
- Germany
- Pakistan
- Taiwan
- Mexico
- South Korea

OUTPUTS



Improved Data Access and Use



Recognition of OBI Model



Data-Driven Approaches to Research

Final Priority Setting Partnership (PSP) Workshop

The final workshop for the National Epilepsy Priority Setting Partnership (PSP) was held virtually from April 6–7, 2021. Participants from across Canada with lived experience of epilepsy or experiencing seizures, their family, friends, caregivers, and healthcare professionals shared their personal perspectives and worked together to create consensus on the top 10 questions for research on epilepsy and seizures.

OBI, in partnership with a EpLink, is creating a report about the entire priority setting process. It will also be supported with knowledge translation products including a press release, infographic, and webinar. The top 10 list will be shared with researchers, funding agencies, industry, and policy makers, and disseminated this year at the Canadian League Against Epilepsy scientific meeting and the International Epilepsy Congress.

This partnership brought together the voice of the patient community to help identify what research matters the most. OBI values patient engagement and will continue to make opportunities for communities to be part of the research process and create impactful outcomes.

For more information, please visit the [PSP webpage](#).



2022 GEEK Funding Opportunity

The GEEK (Growing Expertise in Evaluation and Knowledge Translation) program provides funding, evaluation expertise, and support to community-led programs and services for people living with brain disorders.

The 2022 application is now open! Visit braininstitute.ca/geek for more details.

OBI-GEEK Funding Opportunity

The **OBI-GEEK** (Growing Expertise in Evaluation and Knowledge Translation) program will provide funding, evaluation expertise, and support to community-led programs for people living with brain disorders.

Application Deadline:
October 1, 2021

Register for the Information Webinar
September 10, 2021
Visit braininstitute.ca/geek



Epilepsy Ottawa Novela Study Recruiting Participants to Test nEureka – a Smart Seizure Tracking Device

Current seizure tracking methods for people with epilepsy can be difficult to use routinely. [Novela Neurotech](#), an OBI portfolio company, developed nEureka, a wearable smart device to simplify seizure tracking and management.

OBI is partnering with Epilepsy Ottawa and Novela Neurotechnologies for the Epilepsy Ottawa Novela Study (EONS). This study will investigate users' perceptions on the effectiveness of the device, and its impact on quality of life.

EONS is seeking adults with epilepsy, to participate in this study and try out the device for 3 months. Participants must be at least 18 years old, have epilepsy or seizure disorder, have at least 4 seizures a month, and understand written and spoken English. Want to find out more about EONS or become a participant in the study? [Click here to learn more.](#)

STUDY PARTICIPANTS NEEDED



The image shows the nEureka smart seizure tracking device, which includes a smartwatch and a tablet. The smartwatch displays the time 08:30 and the date Thu, Apr 12. The tablet displays the nEureka app interface, which includes sections for Seizures, Sleep Monitoring, and Today's Medication. The Seizures section shows 2 seizures. The Sleep Monitoring section shows Sleep Time (7:15 - 6:32), Sleep Alerts (2), and Sleep Quality (95%). The Today's Medication section shows Carbamazepine and Depakote extended release.



Study Coordinator:
Natasha Curtis
study@epilepsyottawa.ca
Epilepsy Ottawa
211 Bronson Ave., Suite 207
Ottawa, ON, K1R, 6H5

OUTPUTS



Partnerships



**New or Improved
Diagnostics,
Interventions,
and Treatments**

OBI Public Talk – Meaning Through Movement

Movement in all forms has profound impacts on our brains across our lifespan, from improving mental health to reducing risk of dementia, and more. On May 26, 2021, OBI hosted a Public Talk on 'Finding Meaning Through Movement' to kick off the Wellness Series. This talk received positive feedback and appreciation from attendees.

Dr. Tom Mikkelsen, OBI President and Scientific Director, provided a land acknowledgement and reflection in his opening remarks, on our individual relationships with the land which we reside in, and finding meaning in movement and activity, especially during the COVID-19 pandemic and times of stress. Panelists discussed the benefits of physical activity on brain health, sociocultural barriers to physical activity and how to empower marginalized populations through movement.

The panel included:

- Sarah Robichaud – Executive Director and Founder of Dancing with Parkinson's. Sarah was the recipient of the Community Hero Award by the Toronto Raptors for her efforts to keep seniors active and engaged during the pandemic.
- Dr. Laura Middleton – Associate Professor at the University of Waterloo's Department of Kinesiology. Her research investigates the role of a healthy lifestyle in the prevention of dementia and improving well-being among people living with dementia, with a focus on physical activity.
- Dr. Patrick Jachyra – A post-doctoral fellow at the Azrieli Adult Neurodevelopmental Centre, CAMH, examining the interconnections between mental health and physical activity among individuals diagnosed with developmental disorders. He is also the founder of a community recreation program for youth with developmental disorders called the Extraordinary Youth Council Program.
- Dr. P. David Howe – Medical Anthropologist and the Dr. Frank J. Hayden Endowed Chair in Sport and Social Impact at Western University's School of Kinesiology. His research focuses on the sociocultural factors that include physical activity, disability sport and to empower marginalized populations through movement.

The talk was moderated by Wency Leung, Health Reporter for the Globe and Mail. [View the full talk here.](#)

OBI PUBLIC TALKS

The Wellness Series: Find Meaning in Movement

We often think of physical activity contributing only to physical fitness – but there is strong evidence to support that movement benefits, protects, and sustains our cognitive fitness as well. Movement in all forms has profound impacts on our brains across our lifespan, from improving mental health to reducing risk of dementia, and more.

Join our panel of advocates, community leaders, and researchers to discover how only a few moments of movement each day is an investment to promote brain health for years to come.

Bring Learning to Life

SPEAKERS:

- Sarah Robichaud**, Executive Director and Founder of Dancing With Parkinson's. As a professional dancer, she has performed and choreographed projects for over 20 years. Sarah was the recipient of the Community Hero Award by the Toronto Raptors for her efforts to keep seniors active and engaged during the pandemic.
- Dr. Laura Middleton**, Associate Professor at the University of Waterloo's Department of Kinesiology. Her research investigates the role of a healthy lifestyle in the prevention of dementia and improving well-being among people living with dementia, with a focus on physical activity.
- Dr. P. David Howe**, Medical Anthropologist and the Dr. Frank J. Hayden Endowed Chair in Sport and Social Impact at Western University's School of Kinesiology. His research focuses on the sociocultural factors that include physical activity, disability sport and to empower marginalized populations through movement.
- Dr. Patrick Jachyra**, A post-doctoral fellow at the Azrieli Adult Neurodevelopmental Centre, CAMH, examining the interconnections between mental health and physical activity among individuals diagnosed with developmental disorders. He is also the founder of a community recreation program for youth with developmental disorders called the Extraordinary Youth Council.

MODERATOR:

- Wency Leung**, Health Reporter at The Globe and Mail

Date: Wednesday, May 26, 2021
Time: 6:00 - 7:00 PM EST

[Register here](#)

| METRICS | | OUTPUTS | |
|----------------------|---|----------------|---|
| 643 Attendees | International Views USA – 42 , UK – 18 , and 1 from Russia and Australia | Media Coverage | Public Access to Research and Information |

Zentrela – Objective Test for Cannabis Impairment

Modern drug tests for cannabis measure the concentration of psychoactive cannabinoids in saliva, urine, and blood. However, these compounds can remain in the body longer than the effects of the drug. In 2019, OBI funded the development of the “Cognalyzer,” an electroencephalogram (EEG) device, created by portfolio company, [Zentrela Inc.](#), that measures the effects of the drug by analyzing brainwaves to test for cannabis impairment.

This clinically validated neurotechnology is the first of its kind to develop an objective measure to quantify the psychoactive effects of cannabis. This is an example of how OBI partners are using innovation in neuroscience to continue to promote community and brain health safety.

The company has recently received [\\$850,000](#) in funding to build a platform to map the effects for various cannabis products.

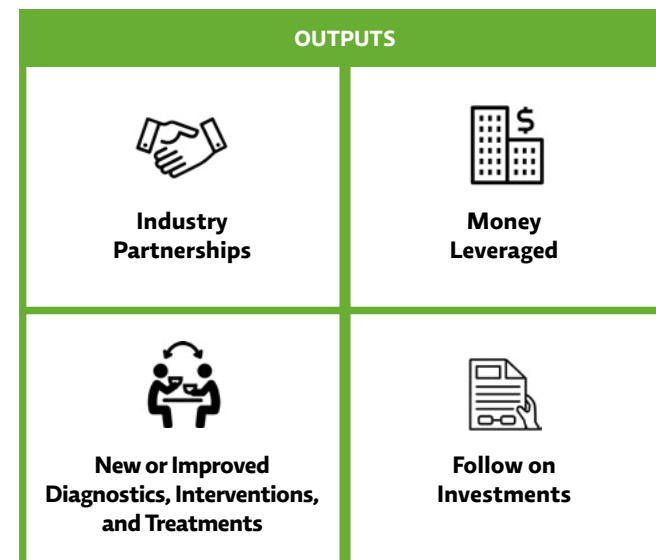


Nanology Labs Secures \$3 Million in Oversubscribed Seed Round

OBI portfolio company, Nanology Labs has secured \$3 million in an oversubscribed seed round.

Nanology Labs develops smart cancer nanoparticles that are transported into cells to administer tumor cancer therapy. This funding will be used to develop T-MX, a nanomedicine that can help overcome tumor hypoxia, a common cause of resistance in cancer treatment. This technology aims to boost cell health and facilitate efficient immunotherapy.

In 2018, Nanology Labs was awarded \$50,000 as part of the [ONtreprenuers program](#). We look forward to seeing what the team will achieve with this new funding! Find out more about OBI’s roster of [portfolio companies](#).

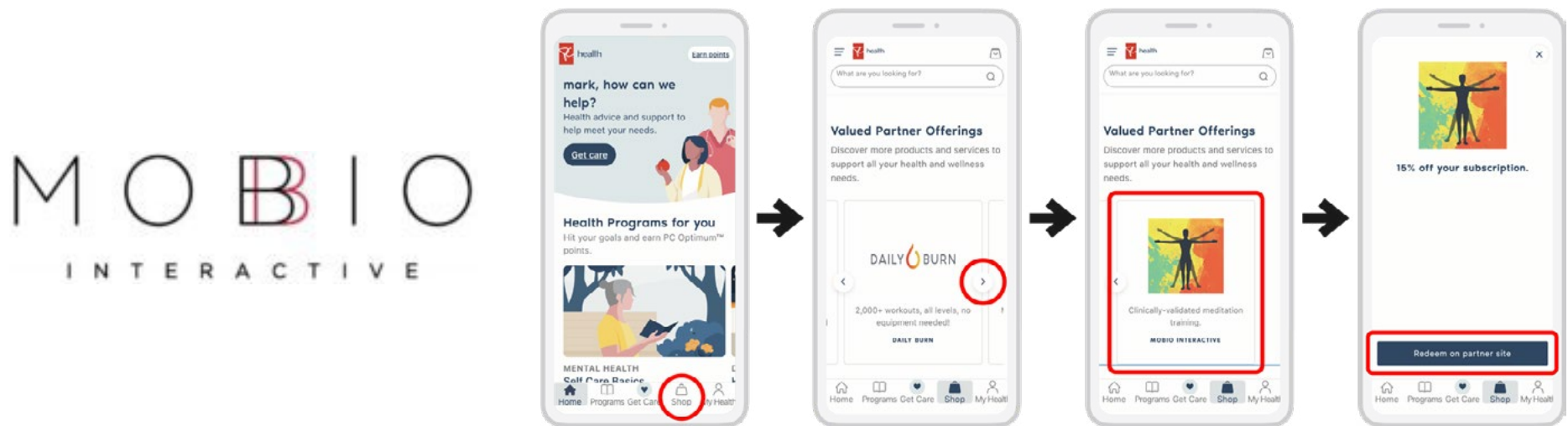


Mobio Interactive's Mental Health Therapeutic

OBI portfolio company [Mobio Interactive](#) is partnering with PC Health, Loblaw Companies to deliver AmDTx, a clinically validated mental health support system, on [Loblaw's PC Health app](#).

As the world's only clinically validated mental health system, AmDTx can meet the needs of the many Canadians experiencing barriers and delays in accessing mental health services, while addressing concerns such as chronic health conditions, day-to-day stressors, and challenges arising from the COVID-19 pandemic.

AmDTx delivers performance enhancement and resilience training as part of a fun and personalised experience. It is currently free to use due to the COVID-19 pandemic.



OUTPUTS



Industry Partnerships



Money Leveraged



Improved Access to Interventions

OBI Hosts Ninth Annual Patient Committee Workshop

On June 17, 2021, OBI virtually hosted its ninth annual workshop bringing together the Patient Advisory Committees from each of its six Integrated Discovery Programs. With over 60 researchers, people with lived experience, advocates, companies, and knowledge translation specialists from across the OBI network in attendance, this workshop created the opportunity to foster discussion about patient engagement in research.

The attendees shared their own perspectives on how patient and community engagement create value for their work. Attendees participated in breakout sessions, where they shared approaches to fostering engagement with a strong focus on diversity and inclusion. The workshop closed with a session to inform members about OBI's plans for renewal and collect feedback on what should be designed into OBI's next phase.

The committee advised to:

- 1) Create more opportunities for cross IDP collaboration on research and patient engagement projects;
- 2) Make stronger efforts to promote inclusivity, especially for marginalized and geographically isolated populations;
- 3) Continue to take on international research projects while also supporting programs at the community level. This feedback is being used to inform OBI's renewal planning.

Visit the website for further information about the [Patient Advisory Committees](#).

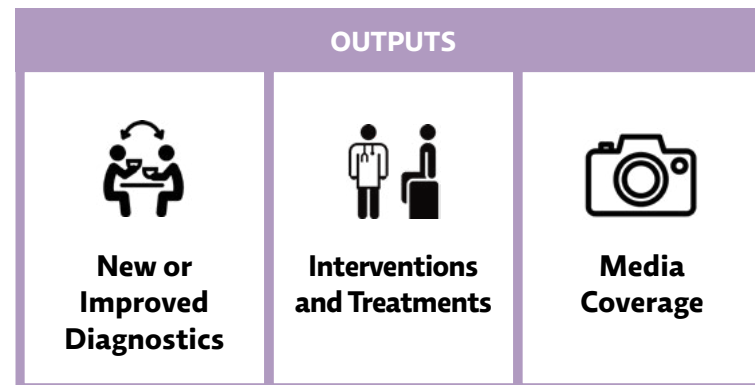
| METRICS | OUTPUTS | |
|---------------------|--|---|
| 62 Attendees |  Partnerships |  Patient Informed Research Activities |

Diamond Therapeutics Presents Groundbreaking Study at NIH Event

OBI portfolio company, [Diamond Therapeutics](#), is a psychedelic drug development company working on sub-perceptual therapies for mental health. On June 4, 2021, Dr. Edward Sellers, Head of the Clinical Advisory Board at Diamond Therapeutics, presented at the [NIH's Psilocybin Research Speaker Series](#).

Based on [findings published](#) in the Frontiers of Pharmacology journal, his presentation, "Low Doses of Psilocybin Enhance Motivation and Attention in Poor Performing Rats: Evidence for Antidepressant Properties," explored the impact of non-hallucinogenic doses of psilocybin on mood and cognitive function.

Diamond Therapeutics has recently been approved from Health Canada for their psilocybin micro-dosing study. Based on this research, Diamond Therapeutics will continue to develop and explore the use of low-dose psilocybin as treatment for psychiatric disorders such as depression and anxiety.



Health in Aging, Neurodegenerative Diseases and Dementias in Ontario Recruiting Participants

ONDRI is recruiting for The HANDDS-ONT (Health in Aging, Neurodegenerative Diseases and Dementias in Ontario) study to test wearable smart sensor technologies for dementia care.

Participants will receive personalized health and activity reports based on these technologies, which can be used to improve personal health. Participants must be 18 years of age or older, and Ontario residents.

Want to find out more about HANDDS-ONT or become a participant in the study? [Click here to learn more.](#)

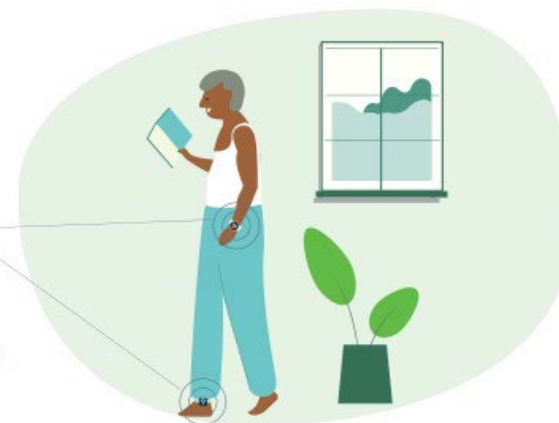
Seeking Participants for a Virtual Brain Research Study



Using wearables & innovative technologies to measure health and activity in the **home & community**



Personalized reports
for study participants



Study: HANDDS-ONT (Health in Aging, Neurodegenerative Diseases and Dementias in Ontario)

Eligibility: Ontario residents over 18 years old

www.ondri.ca/HANDDS | 437-882-8335



News Round-Up

- [CANCHILD online focus group](#)
- [Ontario Brain Institute announces funding for community-led organizations](#)
- [Register for Public Talks](#)
- [Data-sharing among researchers can overcome trust, privacy barriers](#)
- [How dancing can boost cognitive health](#)
- [Autism sharing initiative brings federated data model to research, clinical care](#)
- [Creative Destruction Lab launches neuroscience stream](#)
- [Are there differences in the brains of autistic men and women?](#)
- [Answer ALS announces winners in the 'End ALS Challenge' digital competition](#)



The Ontario Brain Institute is a not-for-profit organization that accelerates discovery and innovation, benefiting both patients and the economy. Our collaborative 'team science' approach promotes brain research, commercialization and care by connecting researchers, clinicians, industry, patients, and their advocates to improve the lives of those living with brain disorders. Welcome to Brain Central. Visit www.braininstitute.ca for more information. Follow us on Twitter (@OntarioBrain). Funding provided, in part by, the Government of Ontario.