

# Brainnovations

Issue 21



ONTARIO  
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# A Frame of Mind

## Care in the Digital Age

By: Tom Mikkelsen, President & Scientific Director

The shift from traditional in-person activities to the digital space brought on by the pandemic has been challenging, but this change gave us a new perspective on how we do our work. Simply by moving online, we've been able to reduce barriers to access and reach more people than ever before. Change doesn't come easily, but despite the challenges we've faced along the way, we are poised to steer the future of brain health into the digital space by investing our energy and resources in the right places.

**CONTINUE READING...**



# Spiderwort Inc. Granted Breakthrough Device Designation by FDA

[Spiderwort Inc.](#), an [OBI portfolio company](#), has been granted a “Breakthrough Device” designation by the [U.S. Food and Drug Administration \(FDA\)](#) for their [CelluBridge™ Spinal Cord Scaffold Implant](#).

Spiderwort is developing novel plant-based biomaterials that have the potential to repair spinal cord injuries and offer new treatment options in the field of regenerative medicine.

The FDA’s [Breakthrough Devices Program](#) helps to accelerate the development, assessment and review of medical devices to provide patients and healthcare providers with more timely access while ensuring that the devices are safe for public use.

“While this designation is a great achievement for our team and a validation of our technology, I am most excited for the patients whose lives we will be able to change with our biomaterial,” said Charles M. Cuerrier, CEO and co-founder of Spiderwort, in the [official announcement](#).

Charles was a winner of the 2017 cohort of the [OBI ONtrepeneurs Program](#), which supports early-stage entrepreneurs to commercialize their brain-related technologies in Ontario.



## OUTPUTS



**Media Coverage**



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

# LUCID's Music Therapy App Reduces Anxiety Symptoms After a Single Session



[LUCID](#), an [OBI portfolio company](#), has [shown](#) that digital music therapy can reduce some types of anxiety. In this case, even a single session was found to reduce the physical feelings of anxiety – like chest pain, insomnia, and fatigue.

A first of its kind, this study highlights the efficacy of LUCID's digital mobile application, [VIBE](#). The app curates therapeutic music tailored for each individual user by measuring and assessing their mood in real-time through the use of artificial intelligence.

“We are driven to explore the full breadth of ways in which VIBE, as a standalone digital health tool and in combination with other technologies, can positively impact anxiety symptoms, both generally and for specific populations,” says Zoë Thomson, co-founder and Chief Science Officer of LUCID, in an [official announcement](#).

OBI is committed to supporting and nurturing neurotechnology in Ontario that improves the lives of people with brain disorders. LUCID's VIBE – a non-invasive neurotechnology backed by scientific evidence – is a great example of a therapeutic tool that can benefit a user by reducing anxiety anywhere, at any time.

Visit [LUCID's website](#) to learn more about their neurotech and learn more about [OBI portfolio companies here](#).

## OUTPUTS



**Evidence-Informed  
Community-Based  
Interventions**



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

# OBI's 2019/20 Year in Review

In December 2020, we launched our latest [Year in Review](#), bringing you stories of the people, projects, and partnerships that enable us to bring knowledge and innovation back to the community.

This past year alone, we have:

- Accelerated discovery – [shedding light on new avenues of research for depression treatment](#)
- Connected researchers around the world – [through our neuroinformatics platform, Brain-CODE](#)
- Built community partnerships – [bringing together patients, caregivers, and healthcare providers to set research priorities in epilepsy](#)
- Empowered individuals to better care for their brain health – [by equipping them with credible, evidence-based tools and information](#)
- Invested in brain health – [by supporting young entrepreneurs and our portfolio companies](#)

And this is only just a glimpse of everything we've accomplished this year!

Check out the full [Year in Review](#) and take a fun survey to learn tips on how to optimize your brain health – and find out how staff at OBI practice what we preach!



## METRICS

**1407**  
Views

## OUTPUTS



**Advanced  
Knowledge**



**Public Access  
to Research  
and Information**

# New Podcast Series Celebrates Neurodiversity

The [POND Network](#) – OBI's neurodevelopmental disorders research program has launched a new [podcast series](#) in partnership with their Youth Participant Advisory Committee (PAC). The podcast shares the lived experiences of the neurodevelopmental disorders community and lessons learned as part of the POND Network to celebrate neurodiversity. Titled [The PONDCAST](#), the series launched its [first episode](#) in December.

The Youth PAC is a complement to POND's longstanding [Participant Advisory Committee](#). These committees are made up of individuals who have personally experienced the clinical and practical issues facing those with neurodevelopmental disorders, their families, and caregivers.

At OBI, PACs help to engage and gain insight from people with lived experience to ensure our research is focused on real-world challenges and to help bring that research knowledge back to the community.

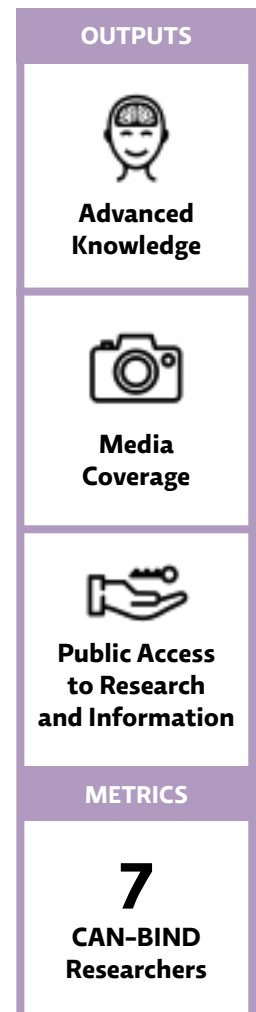


# Seven CAN-BIND Scientists Among 2020 Clarivate List of Highly Cited Researchers

Each year the [Clarivate Web of Science™](#) recognizes trailblazers in science through their annual list of [Highly Cited Researchers](#). This list is made up of individuals who rank in the top 1% by citations within their respective fields.

The 2020 list of Highly Cited Researchers marks an achievement for [CAN-BIND – OBI's depression research program – scientists](#), with 7 of the 11 individuals in Canada's Psychiatry/Psychology category being affiliated with CAN-BIND.

Congratulations to Drs. Sidney Kennedy, Raymond Lam, Roumen Milev, Sagar Parikh, Arun Ravindran, Rudolf Uher, Gustavo Turecki and the late Glenda MacQueen!



# Ontario Epilepsy Agencies Launch UPLIFT - A Cognitive Behavioural Therapy Program Based on Mindfulness

In response to a request by [EpLink's Community Advisory Committee](#) for more quality-of-life research, OBI's epilepsy research program conducted a [study](#) to examine the effectiveness of the "[Using Practice and Learning to Increase Favourable Thoughts](#)" (UPLIFT) program.

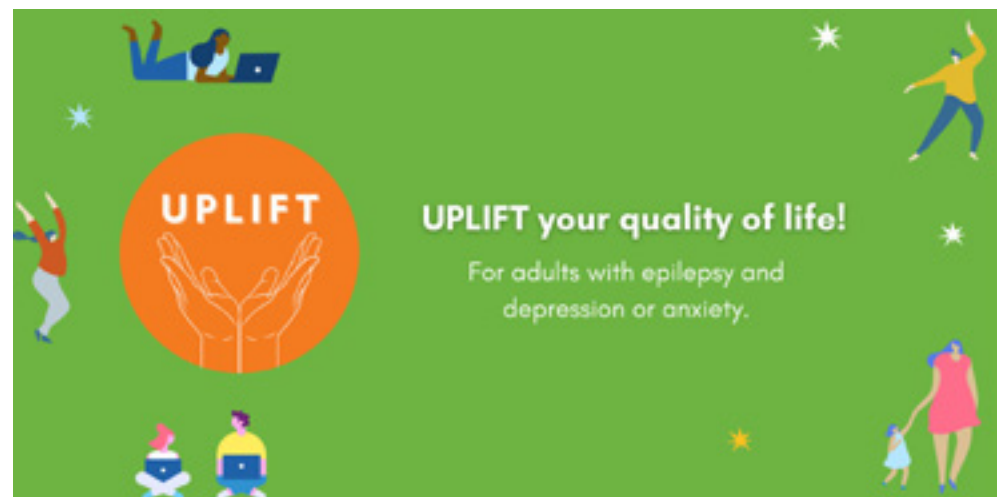
The study found that participants felt a reduction of depressive symptoms immediately following the program's completion and that the improvement remained for six months to a year after completing the program.

Given the positive evidence of the UPLIFT program, the project has been launched in Ontario by [Epilepsy Ottawa](#), [Epilepsy Southwestern Ontario](#) and [Epilepsy Toronto](#). The program includes eight sessions that can be done over the phone or online, with participants learning about epilepsy's effect on mental health and valuable coping mechanisms they can use to improve their mental wellbeing on a daily basis.

This program was initially developed in the United States by researchers at [Emory University](#), seeking to address the unique needs of individuals with epilepsy who experience mood challenges, such as anxiety and depression.

To qualify, participants must be at least 18 years old, have epilepsy, seizures, or a seizure disorder, or be a caregiver to someone who does and be struggling with depression or anxiety.

Contact your [local epilepsy agency](#) to learn more and register for the UPLIFT program and visit [EpLink](#) to learn about OBI's work in epilepsy research.



## OUTPUTS



**Advanced Knowledge**



**Data-Driven Approaches to Research**



**Partnerships**



**Public Access to Research and Information**

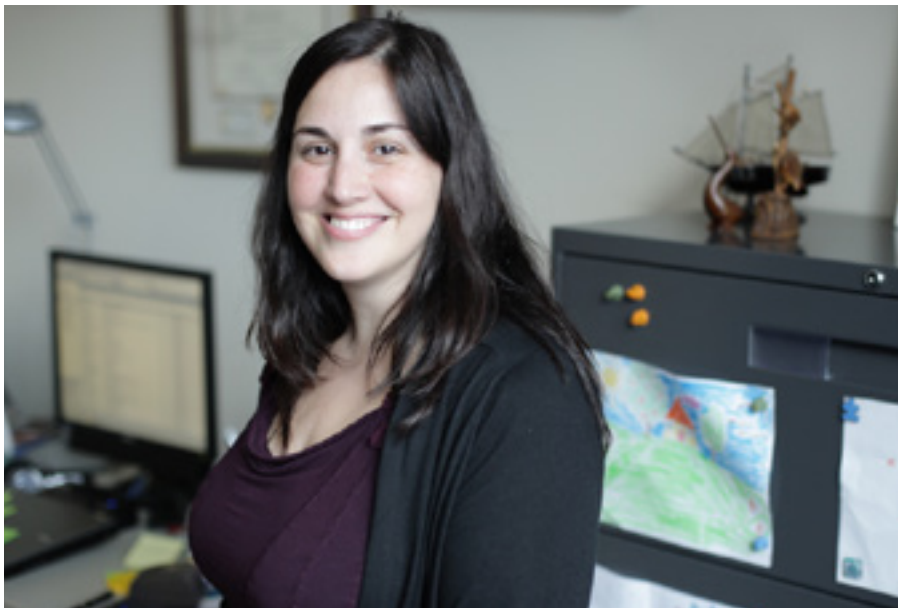
# POND Researchers Evaluate Children’s Mental Health and Substance Use During COVID-19

Four leading child mental health research teams joined forces for the first time to understand the impact of the COVID-19 pandemic on children and families. Brought together by [The Hospital for Sick Children](#), these teams include the [POND Network – OBI’s neurodevelopmental disorders research program](#) – led by POND Co-Director [Dr. Evdokia Anagnostou](#); the [SickKids Child and Youth Psychiatry Outpatient Program](#); [TARGet Kids!](#), and [Spit for Science](#), led by POND Executive Committee member [Dr. Jennifer Crosbie](#).

According to the study’s [preliminary findings](#), 70 percent of children and youth that were surveyed reported worse mental health outcomes during the initial spring lockdowns. “Greater stress from social isolation was the most significant risk factor for worse mental health” and, “the study team says safe social interactions are critical for mental health during COVID-19 waves.”

Recently, the [Canadian Institutes for Health Research \(CIHR\)](#) announced an investment of more than [\\$10.2M](#) to support 55 research teams across Canada as they conduct COVID-19 mental health and substance use research. One of the projects funded by CIHR is led by [Dr. Trish Williams](#), a clinical neuropsychologist affiliated with SickKids, who is working with the POND Network to evaluate a virtual mental health intervention model with a focus on substance abuse, to help families of children with neurodevelopmental disorders.

Learn more about the [POND Network’s research](#), and more about the COVID-19 mental health study [here](#).



## OUTPUTS



**Advanced Knowledge**



**Data-Driven Approaches to Research**



**Partnerships**



**Public Access to Research and Information**



# Release of First Canadian Guidelines for Management of ALS

[ONDRI – OBI's neurodegenerative research program](#) researchers are co-authors on [a newly published set of best practice recommendations](#) for the management of amyotrophic lateral sclerosis (ALS). These are the first clinical practice guidelines of their kind for ALS in Canada.

The guidelines serve as a national standard to improve the quality of care for individuals with ALS. They provide recommendations for healthcare workers from the initial communication of diagnosis to information about nutrition, exercise, and everything in between – inclusive of all genders, ages and stages of the disease.

The new set of recommendations were published in the [Canadian Medical Association Journal](#) with funding and support provided by the [ALS Society of Canada](#) and the [Canadian ALS Research Network](#) – including [proceeds from the Ice Bucket Challenge!](#)

Importantly, these guidelines will be continuously updated as we gain more insight into the disorder. Research priorities can then be identified and prioritized

to fill knowledge gaps, ultimately leading to better treatment and care for individuals living with ALS.

An estimated 3000 Canadians are currently living with ALS. The disease is characterized by gradual loss of muscle tone, as the loss of motor neurons reduces the brain's ability to communicate with our muscles. Over time, an individual with ALS experiences more and more weakness and difficulties in swallowing, speaking and breathing. Consult the [full guidelines here](#), or read the [extended manuscript here](#).



## OUTPUTS



**Advanced Knowledge**



**Guidelines and Toolkits**



**Partnerships**



**Public Access to Research and Information**

# OBI Public Talk – The Potential of Data Sharing: What Data Means for Your Brain Health

On Thursday, November 26, 2020, OBI assembled a panel of experts for a virtual public talk on the potential of data sharing to advance research in brain health.

[Dr. Mona Nemer, Chief Science Advisor of Canada](#), provided valuable context through her opening remarks, in which she elaborated on the federal government's support for collaboration in research as laid out in the [Roadmap for Open Science](#). The panelists then discussed the importance of data sharing from the perspective of research participants donating their time and information to support science and discovery; data being similar to a puzzle where more information is better to piece together a picture, and the need to promote safe data sharing practices.

The panel included:

- Shelly Philip LaForest, a practicing Registered Nurse at [SickKids](#), member of [OBI's Data Access Committee](#), and member of the [Community Advisory Committee](#) for [EpLink](#), OBI's epilepsy research program
- [Dr. Sean Hill](#), the inaugural Director of the [Krembil Centre for Neuroinformatics](#) at the [Centre for Addiction and Mental Health](#), and member of the [Advisory Committee](#) for OBI's neuroinformatics platform, [Brain-CODE](#)
- [Dr. Richard Wintle](#), Assistant Director of [The Centre for Applied Genomics](#) at SickKids and Associate Scientific Director of [CP-NET](#), OBI's cerebral palsy research program
- [Dr. Holly Longstaff](#), Director of Privacy and Access, PHS Research and New Initiatives at the [Provincial Health Services Authority](#).



The talk was moderated by [Dr. Dan Riskin](#), evolutionary biologist and former co-host of [Discovery Channel's Daily Planet](#) science show.

View the full [OBI Public Talk here](#) and learn more about OBI's investment in data sharing through [Brain-CODE here](#).

METRICS		OUTPUTS	
<b>4</b> Panelists	<b>289</b> Total Viewers – Including <b>23</b> International Views	 Media Coverage	 Public Access to Research and Information

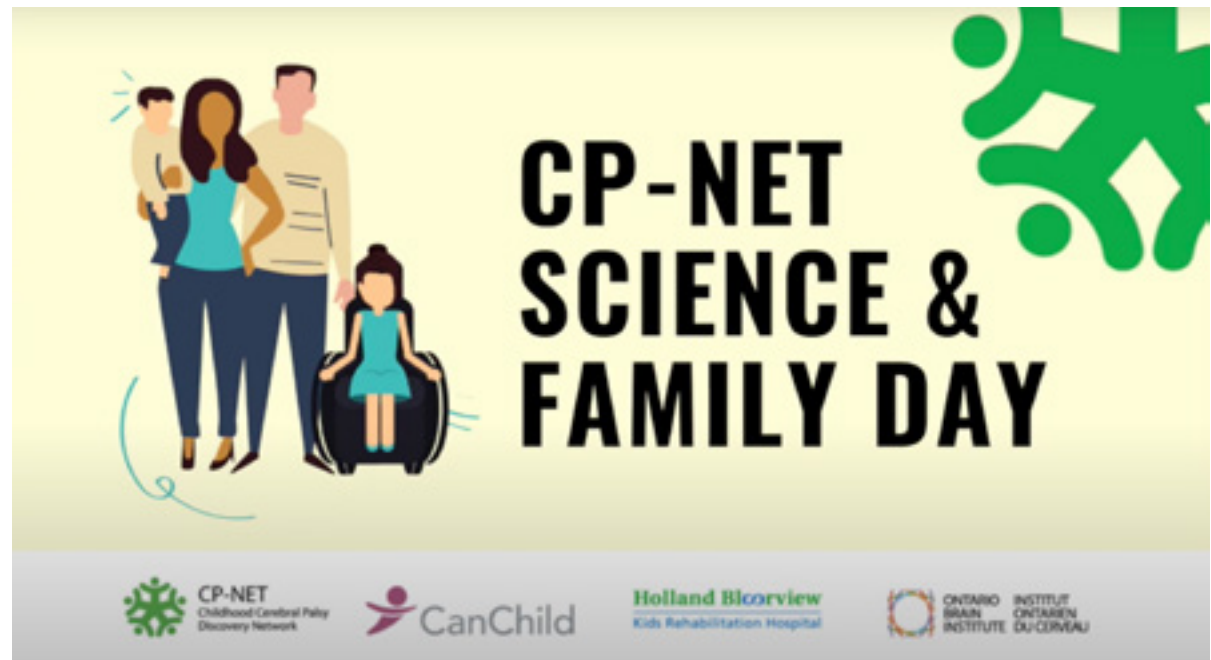
# Bringing the Brain Health Community Together

Science Days, Friends and Family Days, or Research Days are all examples of how the OBI network encourages discussion between the diverse stakeholders in brain health. Each stakeholder offers a unique perspective and insights that can not only help inform research but help share research with the community.

Marking World Cerebral Palsy Day on October 6, 2020, [CP-NET – OBI’s cerebral palsy research program](#) – held its [7th annual Science and Family Day](#). The virtual event brought together families, caregivers, healthcare professionals, and researchers, all of whom are dedicated to furthering research and improving care for those living with cerebral palsy. [Hon. Christine Elliott, Ontario’s Deputy Premier and Minister of Health](#), provided opening remarks and set the tone for what would be an engaging, packed day.

If you are curious to learn more about the discussion at these events, please check out the resources below:

- Recorded presentation sessions and other resources from the CP-NET [Science and Family Day](#)
- Resources and previous [Family Research Days](#) from the POND Network
- Updates and resources from CAN-BIND’s [Friends and Family Days](#)
- [Publications and impact stories](#) from ONDRI
- [Newsletters](#) from CONNECT
- [Newsletters and guidelines](#) from EpLink



# Visit ONDRI's New & Improved Website

[ONDRI – OBI's neurodegenerative diseases research program](#) – has launched their newly revamped [website](#)! Click [here](#) to learn about our efforts to advance neurodegenerative disease research, consult helpful resources and find out how you can get involved today.

ONTARIO NEURODEGENERATIVE DISEASE RESEARCH INITIATIVE

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ABOUT RESEARCH TEAM IMPACT GET INVOLVED

Home

## Innovative Research That Makes a Difference to Peoples' Lives

About ONDRI

### ONDRI has adopted a unique approach to dementia research

Ontario Neurodegenerative Disease Research Initiative (ONDRI) is a highly collaborative endeavour based on team science\* principles. ONDRI research tackles the complexity of dementia by studying multiple diseases related to neurodegeneration (or the the gradual loss of structure and function of brain cells), together. In this mission, ONDRI has adopted a unique approach.

Learn how

Select resources for our community of care partners.

COVID-19 resources

# Shape the Future of Concussion Research in Canada

Do you have questions about the diagnosis, prevention, treatment or care of concussion, which you feel could benefit from research? You can now participate in a research study to help determine the top ten questions that concussion researchers should answer, and help shape the future of concussion research in Canada.

The study is being conducted by the [Concussion Priority Setting Partnership \(PSP\)](#), alongside the [James Lind Alliance](#), [Canadian Concussion Network](#), [CHEO](#), and the [University of Ottawa](#).

Visit the [Concussion PSP's](#) website to learn how you can participate today.



# In the News

- [Dancing With Parkinson's named one of the "Top 10 Winners of 2020" by Toronto Star](#)
- [Dr. Sandra Black receives Lifetime Achievement Award](#)
- [Israeli duo's early Alzheimer's detection test brings cure one step closer](#)
- [Mindset Pharma closes Ontario Brain Institute funding and announces private placement offering](#)
- [Ontario Brain Institute and Eli Lilly Canada collaborate to train future Canadian neuroscience leaders](#)
- [RetiSpec announces partnership with GenTex to commercialize Alzheimer's disease detection technology](#)



*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](http://www.braininstitute.ca) for more information. Follow us on Twitter (@OntarioBrain). Funding provided, in part by, the Government of Ontario.*