



WHO IS THE CBRS

The Canadian Brain Research Strategy ([CBRS](#)) is a pan-Canadian effort to develop a national research strategy for brain and mental health. CBRS Leadership is comprised of the directors of 40 neuroscience and mental health institutes and programs across the country, along with representatives of early career researchers, Indigenous Knowledge Holders Group, and patients and caregivers.

Our mission has united Canada's neuroscience and mental health researchers, in coalition with Indigenous peoples, people with lived experience of brain conditions, private and public science funders, health charities and non-profits, and industry.

Together, we have developed a clear and compelling vision for targeted investment in brain research to drive social, health, and economic advancement for Canada and the world.

WHY DOES THE CBRS EXIST

Our brains define who we are, how we behave, what we strive for, and the ways we develop relationships within ourselves (*spirit, mind, emotions, body*), each other (*honoring/following our traditions*), and the land and water (*reciprocity*). Because our brains are so integral to our capacities to live good lives, brain research has the promise to create a better future for all Canadians.

More than 7.5 million Canadians reported living with a neurological or mental health disorder in 2019. That number is growing rapidly since the COVID-19 pandemic and with aging demographics. Understanding the brain - in health, development, disease, and resilience - will be critical to Canada's success and well-being in the 21st century.

WHAT IS THE CBRS TRYING TO ACHIEVE

The collective national vision for brain science and societal impact represents a deep, informed perspective to leverage Canada's unique strengths in brain research: 1) *Collaborative* – combining efforts in a scientific culture of coordination and partnership; 2) *Transdisciplinary* – involving diverse voices of researchers as well as partners outside of academia such as Indigenous Peoples, patients, and industry; and 3) *Open* – making scientific knowledge on the brain transparent, shareable, and freely accessible to everyone.

The time is now to make brain and mental health research a national priority with targeted federal investment towards the creation of a Canadian Brain Research Initiative.

We have the network, partnerships, vision, and strategic plan in place. Now we need the funding to catalyze this network into concerted, bold, and concrete action.

CBRS INDIGENOUS INITIATIVES

Our vision for a comprehensive approach to brain research and health honors Indigenous wisdom in understanding the interconnected nature of health. In recognizing the profound value of Indigenous perspectives in all our organizational pursuits, we acknowledge the historical suppression of Indigenous voices within Canadian colonial structures.

“Indigenous people are not well represented in brain research - brain research is not focused on Indigenous peoples, or researchers have not yet had the conversations about cultural relevance. If we do not find a way to include Indigenous people, the disparities that exist in these research domains, and accessibility to innovations and treatments may only grow”.

- Dr. Christopher Mushquash, IKHG Member

In our commitment to fostering true collaboration and inclusivity, we strive to transcend historical barriers and create meaningful partnerships. This integration is not only crucial to advance our understanding of the brain but also stands as a testament to our commitment to affirming the community expertise and sovereignty of First Nations, Métis, and Inuit people.

The CBRS has gathered Indigenous leaders across Canada who have research interests in brain and mental health to form the Indigenous Knowledge Holders Group (IKHG). We convened a workshop in 2021 to identify ways that Indigenous stakeholders can have an explicit voice in the initiative, weave Indigenous knowledge into the fabric of the CBRS, and support Indigenous brain and mental wellness. The workshop led to the following guiding principles:¹

1. **Embracing Indigenous Knowledge:** Integration of Two-Eyed Seeing in research and education. Learning to see from one eye with the strengths of Indigenous knowledge and ways of knowing, from the other eye with the strengths of mainstream knowledges and ways of knowing and learning, and to use both eyes together for the benefit of all.
2. **Partnership:** New partnerships and networks that embrace strength-based approaches and community engagement. Finding cross-cultural understandings, translating constructs of interest, and establishing trust.
3. **Appreciating Diversity:** Increased understanding of the heterogeneity of Indigenous communities and nations, including the unique needs of each community, its desires, goals and challenges.
4. **Connectivity:** Stronger connections between Indigenous researchers, investigators who conduct Indigenous research, and Indigenous communities. Building upon Indigenous knowledge that everything in the universe is connected, whether it is the connection between ancestral spirits and the mortal world.

¹ Perreault et al (2021) An Indigenous Lens on Priorities for the Canadian Brain Research Strategy. doi:[10.1017/cjn.2021.501](https://doi.org/10.1017/cjn.2021.501)

STRATEGIC PRIORITIES

The CBRS and key stakeholders across the country have identified six near-term priorities - areas of distinction that make Canada a world leader in collaborative, transdisciplinary, and open brain research.

1. **Platform Science:** Envisioning places and mechanisms to incorporate Indigenous Knowledge with brain research in physical areas where those can be applied, such as land-based learning opportunities and Indigenous language retention via Zoom. Sharing ways of how Indigenous Knowledge is applied via tools, data, and expertise will allow research to be more equitable, collaborative, innovative, and productive.
2. **Brain-AI Interface:** Artificial intelligence (AI) are rapidly growing tools, where Indigenous Knowledge could either be benefitted or harmed via exploitation; indeed, establishing principles and pillars of how Indigenous peoples want their knowledge incorporating into these tools is essential to ensuring a healthy, mutually beneficial, and sustainable relationships are advanced in research.
3. **Diversity & Team Science:** Incorporating Indigenous peoples into research opportunities, ventures, and spaces, allows for knowledge bridging between Western and Indigenous Perspectives. Removing barriers and obstacles in research, as well as supporting Indigenous peoples in these roles will allow for more robust and higher quality data and information.
4. **Transdisciplinary Training:** Indigenous peoples view the world in a wholistic sense, where we understand all our relationships (physical, environmental, familial, and spiritual) are tied and bound to each other, in how they affect us on an individual and community level. Collaborating between disciplines (such as hunters, tanners, and craft makers) has been inherently part of Indigenous identity for millennia, and applying this way of thinking in training the next generation in biology, physics, computer science, social science, and the humanities, will allow for greater and faster advances in understanding the brain.
5. **Neuroethics:** Indigenous Traditional Knowledge encompasses spaces, concepts, and ideas, which are foreign to Western research, and vice-versa. Building guidelines, touch points, and protocols between Indigenous Traditional Knowledge and research will be key to understanding the ethical, legal, and social issues raised by our continuously advancing knowledge of the brain. To make the best use of neuroscience and mental health research, it is important to look at the potential benefits, risks, and broader social impact.
6. **Open Science:** Indigenous peoples need to have tools, equipment, and expertise to share data and knowledge amongst each other, to support our traditional methods of communication. Protecting the sovereignty of how Indigenous data is collected, as well as ensuring that present and future partners respect how Indigenous peoples want to advance and develop, will ensure that they are an integral part of a better future for brain science.

Contacts: **Andrew Manitowabi (Mamaateshiins), BA, BBA**
Indigenous Initiatives Lead, Canadian Brain Research Strategy
andrew.manitowabi@canadianbrain.ca
www.linkedin.com/in/amanitowabi/

Jennie Z. Young, PhD
Executive Director, Canadian Brain Research Strategy
jennie.young@canadianbrain.ca
www.linkedin.com/in/jzyoung/