

CANADIAN BRAIN RESEARCH STRATEGY 2022 LEADERSHIP RETREAT REPORT

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Executive Summary

The leadership of the Canadian Brain Research Strategy (CBRS) gathered in a retreat at the CERVO Brain Research Centre in Quebec City on November 21-22, 2022 to deliberate on the emerging national strategy for brain research. The assembly brought together leaders in brain science from across the country, including directors and early career researchers from neuroscience and mental health institutes, Indigenous Knowledge Holders Group members, and patient representatives to align on the path towards a brain research initiative for Canada.

A keynote address by Blake Richards (Assistant Professor at Mila and McGill University) and Joel Zylberberg (Associate Professor at York University) set the stage with their blue-sky vision for collaborative, transdisciplinary, and open brain science. Completed and ongoing engagements in key sectors of the neuroscience and mental health research ecosystem in Canada were broadly reviewed. Leadership discussed and determined effective ways to leverage current and foreseeable stakeholders' consultation outcomes in building a collective national initiative for brain research. Strategies were fashioned to amplify the reach of ongoing engagements and consultations for a broader, more inclusive consensus across the diverse brain research landscape and other key sectors.

Leaders then participated in two rounds of small group discussions to identify and envision what is needed to concretely advance the [six strategic priority areas](#) that are guiding CBRS efforts in building a Canadian Brain Research Initiative. It was evident that the six strategic priorities intersect through various dimensions and that targeted programs within a Canadian Brain Research Initiative should focus on this convergence. The identified path forward involves leveraging the connections of leaders to expand and strengthen ongoing relations with key stakeholders, including broader consultation with the government.

Retreat Outcomes

CBRS stakeholder consultations and the emerging national strategy for brain research

On the path to building a Brain Research Initiative for Canada, the CBRS is actively engaging various key stakeholders representing the diverse neuroscience and mental health research landscape nationwide. This is crucial to attaining a collaborative, broad and mobilizing unified voice that will inspire and guide the government to invest in national-level resources, infrastructure, and policy to meet Canada's current and future needs in the brain research communities while driving innovation and development. The key points from completed and planned CBRS consultations and engagements with different stakeholders that contribute to the developing national strategy were outlined at the retreat as follows:

- **Researcher Roundtables:**
CBRS convened neuroscience and mental health researchers from across the country in a series of roundtables starting in fall 2021 and through to 2022 around each of the six strategic focus areas. Participating researchers engaged in small group brainstorming sessions to highlight the urgent and unique opportunity to advance collaborative, transdisciplinary, open brain research in Canada and specify the priority national-level resources and needed activities. Consultations with other key groups of researchers in the brain and mental health research landscape are currently ongoing and planned. A roundtable meeting with the Association of Chairs of Psychiatry in Canada was convened in the fall of 2022, and the roundtable for the Canadian Chairs of Psychology will hold in 2023.
- **Engaging People with Lived Experience:**
CBRS held a series of Lived Experience Sessions in mid-2022 with people with lived experience (PWLE) of brain conditions, family and caregivers, patient representatives, and advocates to build emerging themes in the national research strategy. Over the course of two introductory workshops and six focus groups, lived experience participants discussed the successes, challenges, and opportunities for brain research in Canada and assessed the current and future potential to impact the lives of people living with brain conditions. PWLE emphasized the impact of collaboration with diverse perspectives and that collaborative, transdisciplinary, open approach will greatly improve the efficiency of research to impact care and service delivery in health. They also provided feedback on the Strategic Focus Areas outlined in the emerging national strategy.
- **Engagements of Indigenous People:**
CBRS Indigenous Initiatives began a series of Introductory Sessions in mid-2022 with Traditional Knowledge Holders and Elders, academic researchers including early career and trainees, heads of Indigenous research organizations, community organization representatives, and health administrators. Indigenous perspectives around the emerging brain research initiative are being garnered in ongoing conversations with/between engaged stakeholders. Individuals have highlighted the strengths of Indigenous knowledges and ways of knowing, and the importance of finding cross-cultural understandings and building partnerships through strength-based approaches that include community engagement.

- [CBRS Funders Coalition](#)

The CBRS Funders Coalition serves as a catalyst for collaboration among approximately 30 funding organizations spanning Canada's diverse neuroscience and mental health research landscape. Since fall 2021, coalition members have convened for roundtable discussions, sharing best practices, addressing shared challenges, and shaping coordinated national efforts to drive advancements in brain and mental health research. The coalition's size and influence, coupled with a strong alignment in investments towards collaborative, transdisciplinary, and open research approaches, foster an environment conducive to co-developing innovative solutions. While the organizations advocate for national-level resources, they do not directly fund the CBRS initiative, as government support is required. Nevertheless, their collaborative engagement in small group meetings focused on CBRS' six strategic priority areas underscores their commitment to driving concrete advances in research. This alignment presents a unique opportunity to address common challenges and enhance neurological and mental health outcomes for all Canadians

- [Consultations with Industry](#)

As part of the emerging national strategy for brain research, the CBRS is carrying out consultations with Canadian-based industries to explore and build on the unique strengths of Canada in brain/AI-related biotechnology. Ongoing consultations with key industries and companies stakeholders focus on articulating their unique needs in a national initiative and on determining ways of collaborating in multi-stakeholder groups, as we bring together the diverse neuroscience and mental health research ecosystem across the country in a collaborative and mobilizing unified voice to advance brain research as a national priority.

- [Government Outreach](#)

In building a case on the need for national-level targeted investment in brain and mental health research, the CBRS is also engaging diverse key stakeholders in government and public organizations. In early 2022, CBRS submitted a brief to the SRSR Committee Study on Successes, Challenges and Opportunity, recommending that Canada establish a national brain research initiative (see [CBRS Submission to SRSR Successes, Challenges, and Opportunities](#)). Ongoing engagements and consultations continue to explore three layers of outreach to civil servants, policy analysts, etc.; elected officials and senators; and collaborative advocacy organizations.

CBRS strategic priorities as the cornerstone of a collective vision for brain research in Canada

Broadening consensus and exploring a collective vision around the CBRS strategic priority areas have the potential to transform brain science and mental health research by bridging scales of complexity and amplifying societal impact. Through two rounds of small group discussions, participants identified and envisioned major themes and national-level resources to advance the six strategic priority areas: Open Science, Platform Science, Diversity & Team Science, Transdisciplinary Training, Neuroethics, and Neuroscience-AI Interface. Building on the synthesis from consultations, we outlined gaps in content and outreach and brainstormed on needs in each priority area can inform a national brain research initiative for Canada. The course of the discussions also revealed the intersection and overlap between strategic priorities, emphasizing the need for a cohesive overarching national strategy. The collective national vision for brain science and societal impact represented in the established six near-term priorities will strategically amplify the

strengths and efforts of the Canadian brain research landscape to expand ground-breaking innovation and drive excellence.

The path forward: envisioning a Canadian brain research initiative

Moving ahead, the Canadian Brain Research Initiative will strategically integrate the intersections of the six priority areas, maximizing collaboration and innovation with existing investments in brain research by our Funders' Coalition.

CBRS will also continue to gather input from the neuroscience community to shape national resources and policies. Additionally, planned consultations with researchers and other stakeholder groups will bring input from the wider brain research community to advance efforts in mapping out national-level resources, infrastructure, and policies that are necessary to advance brain science for the benefit of Canadians.

In parallel, we will continue to dialogue with federal government, spanning bureaucratic levels and extending to elected officials, such as through the Parliamentary Committee for Science and Research (SRSR). This approach allows us to align our emerging strategy with government priorities, ensuring coherence and maximizing impact.

LIST OF MEETING PARTICIPANTS

Keynote Speakers

Blake Richards (Montreal Institute for Learning Algorithms, McGill University)

Joel Zylberberg (York University)

Conference of Brain Science Leaders

Alan Evans (Canadian Open Neuroscience Platform, Healthy Brains for Healthy Lives CFREF, McGill University)

Allison Sekuler (Rotman Research Institute, Baycrest, Centre for Aging + Brain Health Innovation)

André Longtin (University of Ottawa)*

Aristotle Voineskos (The Centre for Addiction and Mental Health)*

Arlette Kolta (University of Montreal)

Chris Anderson (University of Manitoba, Manitoba Neuroscience Network)*

Darrell Mousseau (University of Saskatchewan)*

David Park (University of Calgary)

Donald Mabbott (SickKids Research Institute, University of Toronto)

Jaideep Bains (Krembil Brain Institute, University Health Network)*

Doug Crawford (Vision: Science to Applications CFREF, York University)*

Doug Munoz (Queen's University)*

Doug Zochodne (University of Alberta)

Gustavo Turecki (Douglas Research Centre, McGill University)*

Guy Rouleau (Montreal Neurological Institute, McGill University)

Judy Illes (Neuroethics Canada, University of British Columbia) – Co-Chair*

Karim Jerbi (UNIQUE Neuro-AI Research Centre, University of Montreal)*

Keith Murai (Centre for Research in Neuroscience, Brain Repair and Integrative Neuroscience Program, Montreal General Hospital, McGill University)

Lisa Saksida (Brains CAN CFREF, Azrieli Program in Brain, Mind & Consciousness CIFAR, Western University)

Lynn Raymond (University of British Columbia)*

Matthew Holahan (Carleton University)

Melanie Woodin (Faculty of Arts & Science, University of Toronto)*

Michiru Hirasawa (Memorial University)

Patricia Conrod (Stratégie en neurosciences et santé mentale de l'Université de Montréal)

Randy McIntosh (Institute for Neuroscience and Neurotechnology, Simon Fraser University)*

Ravi Menon (Robarts Research Institute, Western University)

Robert Sutherland (Canadian Centre for Behavioural Neuroscience, University of Lethbridge)

Ruth Slack (Brain Mind Research Institute, University of Ottawa)

Victor Rafuse (Dalhousie University)

Yoshua Bengio (Montreal Institute for Learning Algorithms, Institut de valorisation des données CFREF, Learning in Machines and Brains CIFAR, University of Montreal)*

Yves De Koninck (Sentinel North CFREF, University of Laval) – Chair

Early Career Researcher Leaders

Caroline Ménard (University of Laval) – Early Career Researcher Leader

Derya Sargin (University of Calgary)

Tabrez Siddiqui (University of Manitoba)*

Indigenous Knowledges Holders Group Leaders

Chelsea Gabel (Métis Nation, McMaster University)*

Christopher Mushquash (Pays Plat First Nation, University of Lakehead)*

Malcolm King (Mississaugas of the Credit First Nation, University of Saskatchewan)

Melissa Perreault (Métis Nation, University of Guelph)

Bryce Mercredi (Métis Nation, Elder)*

Patient Representatives

Deanna Groetzinger (Neurological Health Charities of Canada)

CBRS Secretariat

Andrew Manitowabi (Mamaateshiins) (Indigenous Strategy Consultant for Brain Wellness)

Jennie Z. Young (Executive Director)

Joseph Olajide (Manager, Programs and Partnerships)

*Regrets

CANADIAN BRAIN RESEARCH STRATEGY
CBRS STAKEHOLDER CONSULTATIONS AT-A-GLANCE

June 2021 – November 2022



Jun-28-2021	●	Dr. Jennie Z. Young appointed Executive Director for the Canadian Brain Research Strategy
Jun-28-2021	●	Indigenous Initiatives Workshop #1
Jun-29-2021	● ● ●	CBRS Leaders Strategic Planning Meeting
Aug-24-2021	●	CAN-ACN 2021 Meeting Townhall
Sep-02-2021	●	Early Career Researchers Meeting
Oct-14-2021	●	Open Science Researchers Roundtable
Oct-25-2021	●	Research Funders Meeting
Oct-27-2021	●	Canadian Symposium for Computational Neuroscience Computational Neuroscience Vision and Networking Meeting
Oct-27-2021	●	Neuroethics Researchers Roundtable #1
Nov-18-2021	●	Neurological Health Charities Coalition Members Meeting
Nov-25-2021	● ●	Canadian Science Policy Conference 2021 Panel: A Canadian Brain Initiative?
Dec-01-2021	● ●	International Brain Initiative Coordinating Body Meeting
Feb-28-2022	●	Policy Brief Submitted to House of Commons SRSR Committee Study: Successes, Challenges and Opportunity for Science in Canada
May-05-2022	●	Transdisciplinary Training Researchers Roundtable
May-06-2022	●	Diversity & Team Science Researchers Roundtable
May-08-2022	●	Platform Science Researchers Roundtable
May-09-2022	●	Neuroscience-AI Researchers Roundtable
May-12-2022	●	Canadian Association for Neuroscience 2022 Annual Meeting - Graduate Neuroscience Programs Symposium
May-17-2022	●	Lived Experience Intro Workshop

Jun-07-2022	●	Lived Experience Researchers Workshop
Jun-14-2022	●	Lived Experience Open Science Focus Group
Jun-15-2022	●	Lived Experience Platform Science Focus Group
Jun-16-2022	●	Lived Experience Diversity & Team Science Focus Group
Jun-21-2022	●	Lived Experience Transdisciplinary Training Focus Group
Jun-22-2022	●	Lived Experience Neuroethics Focus Group
Jun-23-2022	●	Lived Experience Brain Science-AI Focus Group
Jul-12-2022	●	Indigenous Initiatives Intro Session #1
Jul-14-2022	●	Indigenous Initiatives Intro Session #2
Aug-04-2022	●	Indigenous Initiatives Neuroethics Focus Group
Aug-19-2022	●	Indigenous Initiatives Diversity & Team Science Focus Group
Sep-08-2022	●	Université de Montréal Psychiatry Research Committee Meeting
Oct-08-2022	●	Policy Brief Submitted to House of Commons FINA Committee for Pre-Budget 2023 Consultations
Oct-21-2022	●	Indigenous Initiatives Intro Session #3
Oct-26-2022	●	CIFAR Learning in Machines and Brains Workshop: Neuro-foundation Models
Oct-28-2022	●	Indigenous Initiatives Intro Session #4
Oct-28-2022	●	Funders Coalition Diversity & Team Science Meeting
Oct-31-2022	●	Association of Canadian Chairs of Psychiatry Roundtable
Nov-01-2022	●	Funders Coalition Meeting
Nov-15-2022	●	Indigenous Initiatives Intro Session #5
Nov-21-2022	●●●	CBRS Leaders Retreat

● Researchers ● People with Lived Experience ● Indigenous Knowledges Holders
 ● Research Funders ● Government ● International Groups