

A close-up portrait of an elderly woman with short, light-colored hair, looking slightly to the right with a gentle smile. She is wearing a grey crew-neck sweater. The background is dark and out of focus.

FEAR **NO** AGE™

Baycrest

Rotman Research Institute

ROTMAN RESEARCH INSTITUTE

2020-2021 Year in Review

**Bold discoveries.
Fearless aging.**

27

SCIENTISTS

82

TRAINEES

4

SCIENTIFIC ASSOCIATES

34

RESEARCH STAFF

2

CLINICIAN ASSOCIATES

47

New grants received

\$8.7M

New grant funding awarded over multiple years

4

CANADA RESEARCH CHAIRS, INCLUDING A CANADA 150 RESEARCH CHAIR

17

SCIENTISTS AMONG THE MOST CITED IN THE WORLD

5

ENDOWED RESEARCH CHAIRS

23

ADMINISTRATIVE AND SUPPORT STAFF

RRI BY THE NUMBERS

\$26.9M

Total research funding spent (including operations and grants)

4TH Most research-intensive hospital in Canada

69

Keynote and invited presentations by scientists

25 OUTREACH EVENTS

43 STUDENT AWARDS

58 INTERNATIONAL PARTNERSHIPS

185 PUBLICATIONS

RESEARCH UNITS AND CENTRES

Anne & Allan Bank Centre for Clinical Research Trials
Ben and Hilda Katz Inter-Professional Research Program in Geriatric and Dementia Care
Kimel Family Centre for Brain Health and Wellness
Kunin-Lunenfeld Centre for Applied Research & Evaluation (KL-CARE)
Research Training Centre (RTC)

CORE RESEARCH THEMES

Cognitive neuroscience
Aging and brain health
Alzheimer's and related dementias
Neuroinformatics



TABLE OF CONTENTS

- 4 Leadership Message**
- 5 Rotman Research Institute
Leadership and Management Team**
- 6 COVID-19**
- 8 Dementia: Prevention**
- 9 Dementia: Detection**
- 10 Dementia: Treatment**
- 11 Research Training Centre**
- 13 Kunin-Lunenfeld Centre for
Applied Research & Evaluation**
- 15 Centre for Aging +
Brain Health Innovation**
- 17 The Anne & Allan Bank Centre
for Clinical Research Trials**
- 19 Fostering Community
Through Research**
- 20 Spotlight: Those Who Make
Us Great**
- 21 Honours, Awards, and Accolades**
- 22 Moving Forward**
- 24 Sharing Our Research**
- 27 Fundraising Spotlight**
- 28 Funding Partners**
- 29 Rotman Research Institute
Scientists, Scientific Associates,
and Clinician Associates**



LEADERSHIP MESSAGE



DR. ALLISON SEKULER

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When we prepared our last annual report, the COVID-19 pandemic was still in its relative infancy. Researchers were only beginning to understand its many impacts on our lives, and we shared with you some of the important work underway in this area at the Rotman Research Institute (RRI). Now, well over a year into the pandemic, we know that COVID-19 has wide-ranging effects throughout a person's entire body, including their brain.

As you will learn in this report, our scientists continue to conduct critical research on this topic, examining the effects of the virus and the pandemic on brain structure and function, mental health, and dementia risk in older adults, leveraging their expertise in brain health and aging, with the ultimate aim of supporting seniors throughout this challenging time and beyond.

Despite the continuing challenges of the pandemic, we have had a lot to celebrate this year. Baycrest was recognized as the second most research-intensive small hospital, and the fourth most research-intensive hospital in the entire country in Research Infosource's 2020 rankings for Canada's Top 40 Research Hospitals. A large number of RRI scientists, emeritus scientists, and affiliated researchers were also recognized as being among the Top 2% Most Cited Scientists in the World, published by Stanford University. We also continued to increase the reach of our research through \$8.7 million in diversified grant funding from a growing number of foundations and organizations, including all three federal granting agencies: the Canadian Institutes of Health Research (CIHR), the Natural Sciences and Engineering Research Council of Canada (NSERC), and the Social Sciences and Humanities Research Council (SSHRC). These accomplishments would not have been possible without the support and guidance of our previous Research Advisory Chair, Neil Fraser. We thank Neil for his many years of service and we look forward to many more years of success working with our new Chair, Dr. Sara Diamond.

This report showcases just some of the ways RRI scientists are helping uncover the mysteries of the aging brain and advancing knowledge in the prevention, detection, and treatment of dementia. As well, we feature Baycrest's inter-disciplinary and inter-professional approaches to research through a number of research units and centres: the Ben and Hilda Katz Inter-Professional Research Program in Geriatric and Dementia Care, the Canadian Consortium on Neurodegeneration in Aging (CCNA), the Research Training Centre (RTC), the Anne & Allan Bank Centre for Clinical Research Trials, the Kimel Family Centre for Brain Health and Wellness, the Centre for Aging + Brain Health Innovation (CABHI), and the Kunin-Lunenfeld Centre for Applied Research & Evaluation (KL-CARE).

We also welcome Dr. Björn Herrmann as our new Canada Research Chair in Auditory Aging, and we feature Dr. Morris Moscovitch, a founding Senior Scientist at the RRI, who was recently named a Member of the Order of Canada for his groundbreaking research on memory.

Following our last report, we again put the spotlight on some of the many individuals who make the RRI so special, including Lab Manager Ricky Chow, Scientific Associate Dr. Eugenie Roudaia, avid research participant Tom Fernandes, and a number of our RRI trainees. Without individuals like them, research at the RRI would not be possible.

An important focus this year has been on developing the RRI's next five-year Strategic Plan. In alignment with this plan, we reaffirm our commitment to equity, diversity, and inclusion, and share the ways in which we are promoting open science. We also take a look at the ways in which Baycrest research is being translated in the community, with impacts on practice, innovation, and policy.

Though the pandemic persists and times remain uncertain, our scientists, staff, and trainees continue to show amazing perseverance as they make bold discoveries to create a world in which everyone is empowered to age fearlessly.



DR. SARA DIAMOND

Chair, Research Advisory Committee, Baycrest

President Emerita, OCAD University, C.M., O.Ont., R.C.A., ICD.D

Dr. Allison Sekuler

Dr. Sara Diamond

Rotman Research Institute Leadership and Management Team

The Rotman Research Institute advances our understanding of human brain structure and function in critical areas of cognitive neuroscience, including perception, memory, language, attention, and decision making. With a primary focus on aging and brain health, RRI scientists and trainees, and other researchers across Baycrest, promote effective care and improved quality of life for older adults through research into age- and disease-related behavioural and neural changes.



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Learn more at baycrest.org/research.

Supporting older adults during the COVID-19 pandemic and beyond

Among those most heavily affected by the pandemic have been older adults (65+), who are at a higher risk for illness and death due to COVID-19 infection, and account for the overwhelming majority of COVID-19-related deaths in Ontario. They are also vulnerable to the effects of social isolation, including depression and worsening of existing medical conditions, that may result from public health measures like physical distancing.

To help inform future interventions and public health policy, and identify ways to support older adults during this time and beyond, RRI researchers are examining the effects of the pandemic on brain structure and function, mental health, and dementia risk.

The pandemic and mental health

A joint study by the RRI and the Centre for Addiction and Mental Health (CAMH) is examining the effects of the COVID-19 pandemic and physical distancing on the mental health of older adults with mood or memory concerns, as well as healthy older adults. Researchers are monitoring changes in mental health and the incidence of psychiatric illness during the pandemic among older adults in Toronto. They are also looking at resilience and coping strategies among this group, both of which are known to support mental health. To date, the study has enrolled 129 participants who have been virtually assessed over a six-month period.

The study is led by Dr. Linda Mah, Senior Clinician Scientist at the RRI. Co-leading is Dr. Benoit Mulsant, Clinician Scientist in the Campbell Family Mental Health Research Institute at CAMH.

Their findings will allow us to better understand the impact of the COVID-19 pandemic on mental health in older adults and in addition, allow public health officials to make informed decisions on how best to implement community-wide restrictions to mitigate the impact of future pandemics or other public health crises, while minimizing mental health risks for older adults.

This study is funded by the Ministry of Health and Long-Term Care Alternative Funding Plan (AFP) Innovation Fund.

Brain structure and function

Researchers at the RRI and Sunnybrook Health Sciences are conducting sensory, cognitive, and clinical assessments, along with electroencephalography (EEG) and magnetic resonance imaging (MRI) of the brain in recovered COVID-19 patients. Study participants are assessed at baseline and several months later, to detect whether brain symptoms are present and whether they resolve or linger.

RRI researchers contributing to this study are Dr. Allison Sekuler, Sandra A. Rotman Chair in Cognitive Neuroscience and Vice-President, Research at Baycrest, Managing Director of the RRI and Managing Director of the Centre for Aging + Brain Health Innovation (CABHI); Dr. Jean Chen, Senior Scientist and Baycrest's Canada Research Chair in Neuroimaging of Aging; Dr. Asaf Gilboa, Senior Scientist; and Dr. Eugenie Roudaia, Scientific Associate.

Their research will help address immediate needs resulting from COVID-19, and prepare for its longer-term impacts. Results will also allow medical professionals to direct patients in need towards treatments as early as possible, and to understand the special needs of older adults living with long-haul COVID-19.

This study is funded in part by the Canadian Institutes of Health Research (CIHR).



Dementia risk

The pandemic may increase the risk of developing dementia in two ways. First, COVID-19 may lead to a decrease in oxygen going to the brain, which could cause damage. Second, physical distancing and other public health measures may result in social isolation and depression, both of which are linked to an increased risk of dementia.

Dr. Rosanna Olsen, Scientist, and Dr. Jennifer Ryan, Senior Scientist, are conducting frequent virtual check-ins with healthy older adults living in the community to assess changes in their mental health, exercise routines, cognitive function, and socialization levels, as well as their exposure to COVID-19.

This study will increase our understanding of factors affecting older adults' dementia risk. This research can also identify ways to support older adults during the pandemic, by helping them mitigate Alzheimer's disease risks and make the most out of life during these unprecedented times.

This study is funded in part by CIHR.

Future thinking

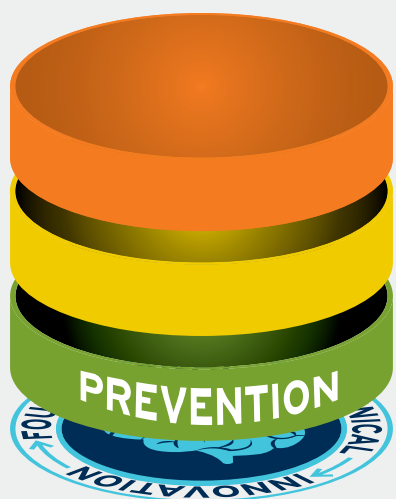
Dr. Donna Rose Addis, Baycrest's Canada 150 Research Chair in Cognitive Neuroscience of Memory and Aging and Senior Scientist at the RRI, and Dr. Shayna Rosenbaum, Adjunct Scientist at the RRI and Professor and York Research Chair in the Faculty of Health's Department of Psychology at York University, are investigating the effects of the pandemic on people's mental health and how this may impact their ability to imagine the future.

People with depression are less able to imagine the future in detail. They may also experience the sense that their future is shortened, particularly during uncertain times.

In the *Thinking Beyond COVID-19 Study*, Drs. Addis and Rosenbaum are surveying participants in 25 countries at multiple timepoints during the pandemic to observe changes in mental health and future thinking. They are also examining whether imagining a post-pandemic future can be used as a method of increasing adherence to public health guidelines. This research will help inform policy to address these challenges during the pandemic and beyond.

This research is funded in part by CIHR, the Canada 150 Research Chairs Program, and the Vision: Science to Applications (VISTA) Program.

If you would like to participate in our research, please [click here](#) to learn more and express your interest.



UNCOVERING THE EFFECTS OF PRIOR KNOWLEDGE ON LEARNING AND MEMORY

The Canadian Institutes of Health Research (CIHR) has awarded a team of RRI scientists a prestigious five-year grant to determine why having prior knowledge of a topic affects how we learn new, related information as we age. This research will pave the way for optimizing the use of prior knowledge to preserve and improve memory as we get older, ultimately helping older adults live life to the fullest.

Dr. Asaf Gilboa and his team, led by post-doctoral fellow Dr. Erik Wing, will recruit younger and older bird experts as well as non-experts to learn new birds while the researchers use functional magnetic resonance imaging (fMRI) to observe their brain activity. The results will focus on how prior knowledge of birds may accelerate learning of new birds in the brain's cortex and offset age-related memory decline.

By recruiting bird experts and non-experts, this research program will be one of the first to look at memory formation in a real-world context: namely, bird watching.

"One advantage of studying bird expertise is that there is a clear structure of bird knowledge. For example, experts consistently understand the different

concepts of 'field sparrow' and 'song sparrow,' and know what features help to tell them apart. We can examine how this knowledge helps experts learn new information," says Dr. Wing. "Similar processes take place in new learning across many domains, from music to language to art."

Unlike memory functions that tend to decline with age, prior knowledge continues to accumulate as we get older, making it an area of strength for older adults. In the long term, this research will determine how to optimally harness this strength to prevent age-related memory decline and improve the quality of life for older adults everywhere.



Visit the **news section** of baycrest.org to learn more about our latest research.



Dr. Björn Herrmann

BAYCREST'S NEW CANADA RESEARCH CHAIR EXPLORES THE LINK BETWEEN HEARING LOSS AND THE BRAIN

Dr. Björn Herrmann, a psychologist and cognitive neuroscientist specializing in hearing and aging, has joined the RRI as the new Tier II Canada Research Chair in Auditory Aging.

Our ears and brains work together to isolate relevant sounds, such as a friend's voice in a busy restaurant, from other sounds, such as background music and other people's conversations. Many older adults develop hearing loss as they age, which negatively impacts this crucial ability to isolate relevant sounds from background noise in day-to-day communication. Hearing loss not only puts them at risk for social isolation, but also increases their chances of developing dementia.

Thanks to support from the Canada Research Chairs Program, Dr. Herrmann is one of four chairholders at Baycrest. He joined Baycrest from Western University, where his research explored how listening and communication change with age.

At Baycrest, Dr. Herrmann plans to explore the brain mechanisms that signal hearing difficulties within noisy environments and how these are linked to cognitive decline.

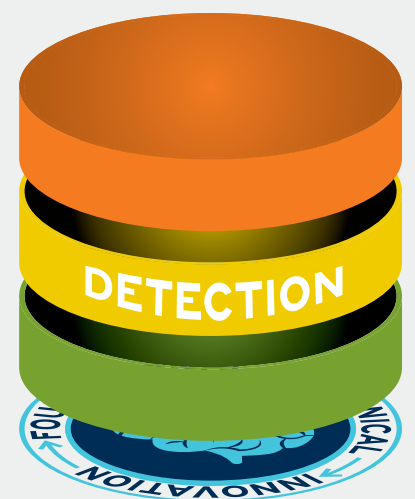
"The first signs of hearing difficulties, such as requiring greater effort to comprehend speech in crowded places, often become

apparent more than a decade before hearing loss is diagnosed," says Dr. Herrmann. "If we better understand the mechanisms underlying hearing loss and identify hearing challenges earlier, we can treat people earlier and better."

Dr. Herrmann will also explore how hearing loss impacts a person's level of social engagement.

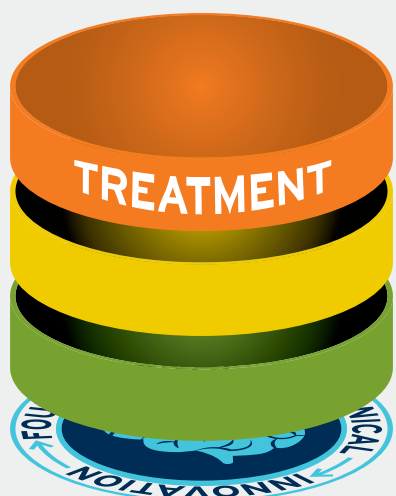
"People who experience hearing problems may zone out temporarily when they find speech comprehension challenging, or they may avoid noisy environments altogether," adds Dr. Herrmann. "Through my research, I hope to help people with hearing problems to stay engaged in social activities and networks."

This work has the potential to help us detect and address signs of cognitive decline earlier, ultimately helping older adults everywhere extend their hearing health and minimize rates of cognitive impairment related to Alzheimer's and other forms of dementia.





Dr. Brian Levine



FIGHTING COVID-19'S EFFECTS ON THE BRAIN WITH GOAL MANAGEMENT TRAINING®

Research has found that COVID-19 can have damaging longer-term effects on our brains, resulting in symptoms such as lack of concentration and memory problems. These cognitive challenges, observed in COVID-19 long-haul syndrome, can affect anyone, but are more substantial among older adults.

To support the growing population of individuals living with COVID-19-related cognitive difficulties, Dr. Brian Levine and his team have received funding from the provincial government's Ontario Together Fund to provide greater access to their evidence-based, cognitive intervention, Goal Management Training® (GMT). This funding makes GMT available for use in clinics, hospitals, and the community through the development of new, easy-to-access online resources.

"With access to this highly effective treatment along with other supports, therapists can help those suffering with the longer-term effects of COVID-19 recover faster," says Dr. Levine, Senior Scientist at the RRI and the primary developer of GMT.

GMT has been established as a leading standardized, evidence-based intervention for executive function or attentional deficits in patients with traumatic brain injury, stroke, multiple sclerosis, and some forms of mild cognitive impairment, a preclinical stage of

dementia. All of these conditions can have similar cognitive effects to those observed in COVID-19 long-haul syndrome.

Previously only available in hard-copy format (kits used by therapists with clients), the expanded program includes the following:

- A newly developed online platform to train therapists to run GMT through telemedicine.
- A central, online hub for therapists, which includes user outreach, membership, GMT training, and community engagement.
- Online patient-focused resources, including interactive complex tasks and activities, as well as a digital GMT workbook.

Parallel resources will continue to be available in hard copy, recognizing that comfort with and access to computers may vary.

With the support of the Ontario Together Fund, the expanded GMT could have a profound impact on people around the world living with cognitive impairment, improving their quality of life and well-being.



Visit the **Goal Management Training®** website to learn more.

Research Training Centre

With the COVID-19 pandemic, the Research Training Centre (RTC) transitioned fully to virtual offerings in 2020-2021. Through our virtual Academic Rounds lecture series, workshops, summer student program, and trainee recruitment events, we kept the RRI training environment vibrant, trainees connected, and research forward thinking.



TRAINING HIGHLIGHTS

Toni Balatinecz Symposium

On February 9, 2021, the RTC and Academic Rounds team hosted a special, virtual Toni Balatinecz Symposium on the “Mechanisms of Neural Repair and Functional Recovery after Stroke.” Featuring world-renowned researchers, the symposium offered attendees deep insights into the impact of stroke-related damage on brain structure and function, how stroke patients can regain functional movement after stroke, and how we can potentially predict speech and language recovery following stroke. The symposium was supported by the generous donation of the late Dr. John Balatinecz.

SpeakEasy & Social Series

With many trainees working remotely during the pandemic, the RTC recognized the importance of bringing trainees together through informal presentations about their

ongoing research, findings, and upcoming work. The SpeakEasy and Social series became a monthly event where organizers hosted informal scientific discussions paired with virtual games to increase both the social ties and collaboration among trainees across labs.

Alumni Networking Lunches

For trainees who were exploring and seeking future employment, the pandemic made networking a challenge. To address this, the RTC reached out to RRI alumni who successfully moved on to positions in academia, government, behavioural and data science, and the scientific start-up community, to have a “virtual lunch” with current RRI trainees. Alumni shared their vocational journeys and tangible tips on how to make the leap to post-RRI employment. The RTC thanks all of our participating alumni for continuing to mentor the RRI community.

The Research Training Centre (RTC) is a unit dedicated to the technical, professional, and career development of the next generation of scientific leaders. Through expert-led lectures, workshops, internships, scholarships, and public outreach initiatives, the RTC provides trainees with opportunities to build research and leadership skills; network with scientific leaders in academia, industry, government, and not-for-profit organizations; and explore career options.

14 virtual professional development events
14 virtual technical/skill development events
22 virtual wellness events
1040 event attendees

27 rounds lectures
1399 rounds attendees
34 scholarships awarded
\$84K in scholarships awarded

Sample Workshops

Conducting Online Research: Methodological and Ethical Considerations, *April 2020*

Clinical Research Skills, Part 3: Effective Engagement with Research Participants, *May 2020*

Virtual Mindfulness, *April-August 2020*

Python for Beginners, *July 2020*

A Beginner's Guide to Data Analysis and Data Visualization in R, *July 2020*

Thinking About Engaged Research and Knowledge Mobilization: Insights from Social Perspectives on Aging, *August 2020*

Publication Panel: Academic, Clinical, and Medical Journals, *December 2020*

Neuroimaging at Rotman 101, Part 1: Intro to MRI, *March 2021*

Sex and Gender in Aging and Dementia Research, *March 2021*

The Study of Aging and Inequality: A Workshop Drawing on Insights from Ethnographic Research, *March 2021*



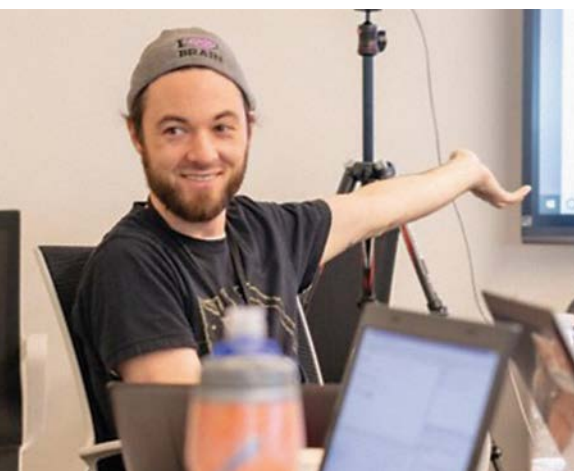
Visit the **RTC website** to learn more.

Research Training Centre

TRAINEE PROFILES



Banting Postdoctoral Fellow **Dr. Moriah Sokolowski** wants to know why people choose – and succeed in – occupations related to science, technology, engineering, and mathematics (STEM). Based in Dr. Brian Levine’s lab, her research focuses on how individual differences in cognitive processes impact performance in STEM, gaining insight into why women remain under-represented in these fields. This work will enhance our understanding of individual differences in learning and memory, with the ultimate aim of supporting learners during their academic and career pursuits. About the RRI, Moriah says: “There are few locations globally that provide this level of expertise and professional development, and access to such an extensive network of researchers, collaborations, and infrastructure. It’s not only a productive place to gain academic training, but also a positive and supportive place to spend my working hours.”



The new (as of Spring 2021) Director of Advanced Analytics in Data Science and Advanced Analytics (DSAA) at St. Michael’s Hospital, Unity Health Toronto, **Dr. Derek Beaton** completed a postdoctoral fellowship in the Strother lab at the RRI and worked with Dr. Malcom Binns as part of the Ontario Neurodegenerative Disease Research Initiative (ONDRI). He built quality-ensuring tools that make it easier to collect and analyze large amounts of neuroscience data for research. Among others, these tools have been pivotal to the success of research on the well-being of those with neurodegenerative conditions and their caregivers. About training at the RRI, Dr. Beaton says, “I could collaborate with anyone, and I always had access to training and the ability to provide training.”



Hsi (Tiana) Wei is a PhD student in the Meltzer lab. With a Bachelor of Arts in English from the National Taiwan Normal University, Tiana is focused on the psychology and neurobiology of language in aging, and has been working with a team of psychologists and engineers to develop a gamified assessment for age-related, word-finding difficulties. She is also interested in analysis models and techniques to assess cognitive decline in aging through natural speech. Says Tiana, “The RRI has exposed me to an unprecedented number of enthusiastic researchers and students, learning opportunities, and thought-provoking conversations through scientific talks, workshops, and interpersonal interactions, helping me grow into a more well-rounded and well-informed research student.”



Former RRI PhD student **Dr. Zorry Belchev** (graduated Dec. 2020) has just joined the Government of British Columbia Ministry of Health as a policy analyst. During her time at the RRI in the Gilboa lab, she developed a new cognitive intervention using Google Streetview to improve memory and navigation in individuals living with traumatic brain injury, and healthy older adults. She found the RTC to be “an invaluable resource for developing technical and professional skills.” Adds Dr. Belchev, “the RRI and RTC’s general acceptance and support of career paths outside academia, including non-academic career nights and networking events, was very helpful to my career exploration and long-term career planning.”

Kunin-Lunenfeld Centre for Applied Research & Evaluation

The Kunin-Lunenfeld Centre for Applied Research & Evaluation (KL-CARE) is a support-and-services hub that works with point-of-care staff, researchers, educators, students, companies, and not-for-profit organizations to facilitate and implement evaluations as well as basic and applied research to inform care and optimize efficiencies.

Evaluating the use of a mobile digital application to support primary care of Baycrest clients in the community

The Integrated Community Care Team (ICCT) at Baycrest brings together various resources into one team to provide geriatric and primary care to medically complex, homebound older adults in North Toronto. With funding from the Centre for Aging + Brain Health Innovation (CABHI), this year the ICCT partnered with TELUS Health Virtual Care (formerly Akira by TELUS Health), to implement and evaluate their virtual care application as an integrated service to ICCT. TELUS Health Virtual Care provided patient-initiated care virtually, allowing ICCT patients to connect directly and immediately to a clinician. The clinicians became part of the ICCT, participating in rounds, following the same plan of care, and accessing medical records. The service enhanced the virtual care services already provided by clinical teams using Ontario Health (OTN). OTN was a partner in the collaboration. The program was implemented in three settings: Baycrest's ICCT, Southlake Geriatric Outreach Team, and Southlake@Home. The project lead, Jagger Smith (Program Director, Ambulatory Transformation, Baycrest), engaged KL-CARE to help evaluate

the implementation and impact of the TELUS Health Virtual Care app through online surveys and interviews. Based on the results, the two management teams decided to extend the program for a year at Baycrest.

Evaluating outcomes and impact for a newcomer settlement agency

JIAS (Jewish Immigrant Aid Services) Toronto is a community-based, not-for-profit that welcomes, supports, and integrates new immigrants and refugees to build a vibrant community and a strong, inclusive Canada that values all newcomers. In 2020-2021, JIAS Toronto engaged KL-CARE to evaluate its volunteer-based supports, including their tutoring, English-language instruction, and conversational support programs. Using online surveys and client interviews, KL-CARE helped characterize JIAS Toronto's client population, examined client satisfaction with the programs, identified program enablers and barriers, and assessed program impact on newcomer confidence and community connectedness. Ultimately, the project was a great learning experience for both KL-CARE and JIAS Toronto. The JIAS team is already incorporating the evaluation results into the design of their future programming and reporting.



17 staff
63 projects



8 manuscripts
14 posters
5 presentations



Visit the [KL-CARE website](#) to learn more.



A rigorous, integrated, and inter-disciplinary evaluation is needed when considering new programs, innovations, and care practices. The KL-CARE team assists health professionals, researchers, companies, and not-for-profits to effectively implement program evaluations, basic and applied research studies, or unique innovations by providing administrative, technical, and scientific support.

KL-CARE'S SERVICES INCLUDE:



Project Management and Administration

- Project scope development
- Grant writing support
- Evaluation tools design
- Facilitation of research contracts and agreements
- Stakeholder engagement



Research Design and Implementation

- Expert scientific, evaluation, and validation consultation
- Ideation and brainstorming facilitation
- Strategic planning and execution of innovation implementation
- Study design
- Research Ethics Board submissions
- Participant recruitment
- Data collection



Analysis and Statistical Consulting

- Data management
- Statistical programming
- Analysis planning
- Quantitative and qualitative:
 - Consulting
 - Analysis



Education and Training

- Research skills development through training and workshops
- Clinical research capacity development
- Clinical and research partnership development



Knowledge Dissemination

- Manuscript development
- Poster preparation
- Presentation preparation
- Program and technology evaluation reporting

Centre for Aging + Brain Health Innovation

The Centre for Aging + Brain Health Innovation (CABHI) is Canada's premier aging and brain health accelerator made up of a unique collaboration of healthcare, science, industry, not-for-profit, and government partners. Established in 2015, CABHI aims to improve the quality of life for the world's aging population by allowing older adults to age safely at home, while maintaining their cognitive, emotional, and physical well-being.

The collaboration between CABHI and the RRI represents the deep connection between aging and brain health research and the innovative solutions designed to improve the lives of older adults and their caregivers.

Implementation evaluation of the web-based Driving Cessation in Dementia Toolkit

In December 2020, Dr. Gary Naglie, Associate Scientist at the RRI and Chief of the Department of Medicine at Baycrest, completed his project, "Implementation Evaluation of Web-Based Driving Cessation in Dementia Toolkit," with funding support from CABHI's Canadian Consortium on Neurodegeneration in Aging (CCNA) Collaboration Program.

The CCNA Collaboration Program encourages later-stage projects from CCNA to submit applications to enter CABHI's innovation pipeline. Funded teams gain access to CABHI's acceleration services, including knowledge mobilization expertise, to get their projects ready for launch across Canada and benefit from joining CABHI's innovation community and networking with other innovators, investors, and industry partners.

Dr. Naglie's project aimed to evaluate a web-based toolkit that provides support to people living with dementia who are no longer able to drive, and their caregivers.

CABHI's Community of Innovation podcast

CABHI's Community of Innovation podcast is where topics on ingenuity, aging, and brain health collide. During its first season, which concluded in December 2020, the show's hosts, Drs. Allison Sekuler (Vice President, Research and the Sandra A. Rotman Chair in Cognitive Neuroscience at Baycrest, and Managing Director at the RRI and CABHI) and Rosanne Aleong (Director, Research, Innovation, and Translation at Baycrest) spoke with experts in healthcare, research, technology, and business, as well as older adults and their caregivers, about the innovative practices and healthtech solutions helping us all lead longer, healthier lives.

Now in its second season, the podcast is exploring a broader range of topics based on current events, including the ways older adults and caregivers are coping throughout the pandemic and the innovations pivoting to support them. Recent episodes have also looked at issues of diversity, equity, and inclusion in the aging and brain health ecosystem.



From March 24-25, 2021, CABHI held its third annual Summit - a virtual event that brought innovators, investors, older adults, and caregivers together to accelerate impact and amplify innovation in aging and brain health.

The Summit, which followed the RRI's annual conference, featured thought leaders from around the world, including RRI scientists Drs. Claude Alain, Asaf Gilboa, and Nicole Anderson. Each session covered a range of topics, such as the impact of music, food, and exercise on cognitive health, as well as the importance of engaging older adults in the design and implementation of aging and brain health innovations.

Dr. Rosanne Aleong also joined the CABHI Summit as a moderator for the panel, "The Researchpreneur of the Future: Skills and Competencies to Break the Innovation Barrier."

Through their collaboration at the Summit, CABHI and the RRI clearly demonstrated the connection between aging and brain health research and the innovative solutions built on that research. One participant had this to say about CABHI and the RRI's collaboration:

"The quality, diversity, and scope of speakers, the amount of learning, innovation, creativity, interactivity, and fun between the RRI Conference and CABHI's Summit, was incredible and gave me a deep understanding of the interaction between science and the arts..."



Keynote Ashton Applewhite | Still Kicking: Confronting Ageism and Ableism in the Pandemic's Wake

The first session of the 2021 CABHI Summit featured Dr. Allison Sekuler's fireside chat with Ashton Applewhite, TED Talk speaker, activist, and author of *This Chair Rocks: A Manifesto Against Ageism*. Dr. Sekuler and Ashton Applewhite explored deeply rooted apprehensions about aging and the corporate and political forces that feed and profit from these fears. Ashton Applewhite encouraged the audience to push back against the ageism that makes us afraid of getting older. The session was a powerful reminder that to live is to age, and we age well not by avoiding disability but by adapting to it, an empowering, enriching, lifelong process that unites us all.


Keynote André Picard | Neglected No More: The Urgent Need to Improve the Lives of Canada's Elders in the Wake of a Pandemic

For the Summit's second fireside chat, André Picard (health columnist at The Globe and Mail and author of the national bestseller *Neglected No More: The Urgent Need to Improve the Lives of Canada's Elders in the Wake of a Pandemic*) and Dr. Allison Sekuler discussed COVID-19's impact on long-term care. During the conversation, André Picard shared perspectives from his timely new book where he reveals the full extent of the crisis in eldercare and offers an urgently needed prescription to fix a broken system.

Keynote Panel | Enough About Me: From the Caregiver's Perspective

Dr. Allison Sekuler joined broadcaster and author of the book *Enough About Me*, Richard Lui, playwright and actor Jill Daum, and executive and former politician Lisa Raitt for a panel about the essential role of the family caregiver. The discussion provided an honest look into the lives of three high-profile figures who each shared their own journeys as caregivers, the steep learning curve they endured as part of the process, and the challenges associated with caring for a loved one while maintaining your own cognitive health.

 Several keynotes are available for free as podcast episodes at cabhi.com/category/podcast

 Videos from the CABHI Summit are available for free [here](#).

The Anne & Allan Bank Centre for Clinical Research Trials

Currently, there is no effective medication available on the market to prevent, treat, or reverse the course of Alzheimer's disease (AD). The approved medications available for AD are intended solely to relieve its symptoms for a limited amount of time. Clinical trials are an essential step in developing effective treatments for AD and related dementias and advancing our knowledge about these neurodegenerative disorders, ultimately helping older adults age without fear.

Led by **Dr. Howard Chertkow** (Baycrest's Chair in Cognitive Neurology and Innovation and Director of the Kimel Family Centre for Brain Health and Wellness), the Anne & Allan Bank Centre for Clinical Research Trials (CCRT) at Baycrest was created to respond to a growing need to explore and test new therapies to prevent, detect, and treat dementia. It is a unique, multi-disciplinary department with the objective to design, conduct, analyze, and publish clinical trials and observational studies to help advance knowledge in - and find effective treatments for - AD and other types of dementia.

The CCRT is composed of a devoted and multi-disciplinary team working across a wide range of specialties, including Baycrest physicians, research coordinators, research assistants, the data analysis team, and research participants.

The research studies currently being conducted at the CCRT are designed to help evaluate the safety and efficacy of treatments such as medication, therapeutic devices, and lifestyle interventions. These include pharmaceutical therapies developed with the goal of slowing the progression of mild cognitive impairment, as well as mild to moderate AD; dietary approaches to improve heart health and consequently brain health; intense cognitive training and exercise; non-invasive and safe electrical brain stimulation; meditation; light therapy; and other non-pharmacological approaches to boost brain function.

None of these studies require participants to stop any of their current medications, and all assessments are offered to participants at no cost.






Dr. Howard Chertkow with a patient. Photo taken before the COVID-19 pandemic.

Examples of ongoing studies include various late-phase, interventional drug and device trials funded by pharmaceutical industry sponsors, a transcranial direct current stimulation study, the Toronto Dementia Research Alliance's Brain-Eye Amyloid Memory (BEAM) study, and observational research studies such as the Comprehensive Assessment of Neurodegeneration and Dementia (COMPASS-ND), Canada's largest dementia study. To date, COMPASS-ND has collected data from over 1,000 participants with various types of dementia or cognitive complaints all across Canada. The extensive biological, imaging, and neuropsychological information collected by this study will help advance our understanding of neurodegenerative illnesses and how to prevent, detect, and treat AD and related dementias.

All studies offered through the CCRT are first reviewed and approved by the Baycrest Research Ethics Board and the applicable regulatory authorities, such as Health Canada, the Food and Drug Administration, and the European Union, to ensure that they meet current ethical and safety standards and are in compliance with the International Conference on Harmonisation - Good Clinical Practice (ICH-GCP).

 Visit the **CCRT website** to learn more and to find out how you can register to participate in a trial.

Fostering Community Through Research

The RRI is committed to a collaborative, inter-disciplinary, and community-focused approach to research. Partnering with clinicians and older adult community members is a key part of our work.



A state-of-the-art research hub to reduce dementia risk

Currently abuzz with the sounds of hammers and drills, the Kimel Family Centre for Brain Health and Wellness will be the flagship of the national dementia prevention program of the Canadian Consortium on Neurodegeneration in Aging (CCNA). With its scientific headquarters housed at Baycrest, CCNA is Canada's largest dementia research initiative.

The Kimel Family Centre is scheduled to start welcoming community-based older adults in the spring of 2022 and will include:

- Stan's gym
- A warm water pool
- A room with soft flooring for yoga and floor exercises
- A creative arts studio

Some of the related research examining the interplay among factors such as diet, exercise, cognitive training, social interaction, and brain stimulation is already underway. The aim is to create personalized longevity prescriptions to help every older adult live longer and live better.

Bringing scientists and clinicians together to improve older adults' quality of life

The Ben and Hilda Katz Inter-Professional Research Program in Geriatric and Dementia Care (Katz Program) brings Baycrest researchers and clinicians from various health disciplines together to conduct research that improves the lives of older adults, including those living with dementia. The program is rooted in the belief that quality of life can best be improved by integrating diverse knowledge and skill sets.

Led by the Katz Program, last year an inter-professional team at Baycrest tested the SafelyYou falls prevention technology, in which cameras linked to an artificial intelligence system were placed in the rooms of long-term care residents at Baycrest. This not only alerted staff immediately when residents fell, but also allowed clinical staff to see why and how residents fell, so that measures could be put into place to prevent future falls. This project was a collaboration among Safely You, Katz and KL-CARE researchers, clinical staff, and IT, among others.

RRI research fosters community through the Kimel Family Centre for Brain Health and Wellness, the Ben and Hilda Katz Inter-Professional Research Program in Geriatric and Dementia Care, and the scientific headquarters of the Canadian Consortium on Neurodegeneration in Aging (CCNA).

Spotlight: Those Who Make Us Great

It truly takes a village to conduct the critical research taking place across the Baycrest campus. Without our wonderful staff members, scientific associates, and research participants, our work would not be possible.



Retired nuclear engineer **Tom Fernandes** is an active research participant at Baycrest with a keen interest in the field of brain health and aging. He joined his first study in 2010. “That study gave me a new perspective,” says Tom. “Thanks to the research team, I learned that you can do a lot to keep your brain sharp.” Since then, he has participated in numerous studies on older adults’ brain function, probing his memory with a variety of activities and magnetic resonance imaging (MRI) scans. Adds Tom, “It gives me personal satisfaction to be a part of research - and as an added bonus, it keeps me out of trouble during my retirement years.”



In his roles as the Electroencephalography (EEG) Lab Manager and Research Assistant, **Ricky Chow** supports research in cognitive and aging neuroscience in the Alain lab, among others by recruiting participants, collecting and analyzing data, and training students on data collection. He is currently gathering key data on markers of mild cognitive impairment, a pre-clinical stage of dementia, knowledge that could eventually lead to the earlier detection and possible prevention of dementia. “Working at the RRI means having the opportunity to meet and collaborate with trainees and scientists with diverse sets of perspectives and expertise,” says Ricky. “I am proud to be part of an organization dedicated to supporting older adults and promoting healthy aging.”



Scientific Associate **Dr. Eugenie Roudaia** co-leads the VisAge (Vision and Aging) lab with Dr. Allison Sekuler. Through her research, she aims to discover how visual functions are affected by Alzheimer’s disease and related dementias, both before symptoms become apparent and throughout the course of the disease. The ultimate goal of this work is to create rapid, inexpensive dementia diagnostic tools that rely on vision and are independent of language or cultural knowledge. As well, Dr. Roudaia is investigating behavioural interventions to optimize perceptual and cognitive function in older adults; she and her team are currently examining the effects of a mindfulness meditation intervention using neurofeedback on stress, loneliness, mood, and cognitive function. Says Dr. Roudaia, “It is exciting and highly motivating to be working in an organization whose main focus is improving the lives of older adults through science and innovation.”

Honours, Awards, and Accolades

Since our last full report in 2018-2019, RRI researchers have continued to be recognized for their extraordinary contributions to the field of brain health and aging.

Dr. Morris Moscovitch, a founding Senior Scientist at Baycrest's Rotman Research Institute (RRI), has been named a Member of the Order of Canada for his critical contributions to the fields of clinical neuropsychology and cognitive neuroscience, and especially for his groundbreaking research on memory.

The Order of Canada is one of the nation's highest civilian honours, with recipients from all sectors of Canadian society recognized for their outstanding achievements, dedication to the community, and service to the country.

As one of the RRI's founding members in 1989, Dr. Moscovitch set the institute on the path for research. His astute observations and revolutionary research have transformed decades-old ideas of how memories change with time and experience, from childhood to old age, both in cognitively healthy individuals and in persons living with Alzheimer's and other dementias.

"I am honoured and very grateful to have been appointed to the Order of Canada and to have my research recognized in this way," says Dr. Moscovitch. "As we better understand memory, cognition and the brain, we can develop effective treatments for disorders such as dementia, and help improve the quality of life of older adults everywhere."

While Dr. Moscovitch continues his research at the RRI, he recently stepped down from his role as the joint RRI-University of Toronto Glassman Chair in Neuropsychology. We welcome

Dr. Morgan Barens, who will take on this role starting in the 2021-2022 academic year.

RRI Senior Scientist **Dr. Cheryl Grady** was elected as a fellow of the Royal Society of Canada. Dr. Grady was recognized for her pioneering research using brain imaging techniques to understand how the brain changes across the lifespan and to identify brain and cognitive changes that occur with Alzheimer's disease. Dr. Grady is the sixth RRI scientist, and the first woman from the RRI, to be elected as a fellow.

Dr. Allison Sekuler, Vice-President, Research, was named one of Canada's Most Powerful Women by the Women's Executive Network. This award recognizes Dr. Sekuler's leadership in advancing under-represented groups in science, technology, engineering, and mathematics. Dr. Sekuler was also elected as a fellow in two leading societies in our field: the Association for Psychological Science and the Psychonomic Society.


Dr. Morris Freedman, Scientist at the RRI and Head, Division of Neurology at Baycrest, was elected as a trustee for the World Federation of Neurology (WFN). The WFN represents 120 professional societies in all regions of the world, with the mission of fostering quality neurology and brain health worldwide. Dr. Freedman has had an active international leadership role in neurological education and will be working as a trustee to develop innovative virtual programs in both developed and developing countries.



Dr. Morris Moscovitch

A large number of RRI scientists, emeritus scientists, and affiliated researchers were recognized as being among the **Top 2% Most Cited Scientists in the World**, published by Stanford University.

The RRI and Baycrest's research impact continues to grow: Baycrest is now the fourth most research-intensive hospital in Canada, second among small hospitals, and first among aging-focused institutions.

 [Learn more here.](#)

Moving Forward

As 2020-2021 drew to a close, we were busy finalizing the RRI's Strategic Plan for the next five years. Our four pillars focus on cutting-edge science, fostering exceptional talent, enhancing research impact, and financial growth and sustainability.

RRI scientists, staff, and trainees are volunteering their time and taking leadership roles in the broader community to make equity, diversity, and inclusion (EDI) a reality across the sector.

Below, we list a sample of the EDI-focused organizations and committees for which RRI researchers, staff, and trainees serve as founders, leaders, and members.

Organization for Human Brain Mapping

FoVea (Females of Vision et al.)

Statistical Society of Canada's Women in Statistics Committee

Canadian Black Scientists Network

Ontario Hospital Association Anti-Racism Task Force

University of Toronto EDI Research & Innovation Committee

University of Toronto Psychology EDI Group

University of Toronto Summer Psychology Research Initiative (SPRINT)

Equity, diversity, and inclusion

The RRI is committed to making changes that lead to a more equal and just workplace and community, and to being intentional in rooting out active and passive forms of discrimination in all aspects of our work, including making our research more inclusive.

In last year's annual report, we reflected on the ongoing incidents of anti-Black racism and violence in Canada and globally and promised to be part of the solution. This year we took a number of steps to keep this promise:

- The RRI Equity, Diversity, and Inclusion (EDI) committee created a statement that will be integrated into the next RRI Strategic Plan. The statement provides clear guidance for all of the RRI's activities and operations, including recruitment and hiring, performance evaluation and recognition, operations in the work environment, professional development, training, and research. As such, EDI concepts are being embedded in every element of the RRI Strategic Plan, currently under development.
 - The RRI signed on to the San Francisco Declaration on Research Assessment (DORA), highlighting our commitment to equity in hiring and evaluation.
 - The RRI participated in the development of hiring best practices for the Ontario Hospital Association to foster a climate of equity, diversity, inclusion, and accessibility.
- As well, the RRI EDI committee facilitated an eight-part reading club addressing topics of race and racism, such as how to talk about race and racism, the history of racism and colonialism in Canada, and anti-racism in science and medicine.
 - At the end of the fiscal year, the RRI was preparing to host its first annual "Day of Service" at Lawrence Heights Middle School, where members of the RRI community, including scientists, trainees, and research staff, would present to the students about their career paths and university experiences. The aim was to provide students with career and higher education information regarding critical areas in which minority students are under-represented, allowing them to make informed decisions and be better prepared to succeed academically.
 - At the end of the fiscal year, we were also preparing to participate in the Youth DiverSTEAM Symposium sponsored by the Ontario Hospital Association and Let's Talk Science, an event to promote careers in science, technology, engineering, arts, and mathematics (STEAM) in hospital-based research institutes to high school students across the province, particularly those from under-represented or racialized communities.



RRI researchers have national and international leadership roles in open science, helping to accelerate research on brain health as well as brain disorders and their treatments:

Dr. Strother and his team are involved in multiple Canadian open science initiatives funded by the Ontario Brain Institute (OBI) and Brain Canada, such as the national Canadian Biomarker Integration Network in Depression (CAN-BIND), the Neuroimaging Informatics platform of Brain-CODE, and the Canadian Open Neuroscience Platform (CONP). Dr. Strother is on the executive committee of CAN-BIND and co-leads the Neuroimaging Informatics platform.

RRI researchers are leading the Ontario node of the International Neuroinformatics Coordinating Facility (INCF), a global organization dedicated to open science. At the 2021 INCF Assembly, Scientific Associate Dr. Kelly Shen presented the considerations and challenges in making big data from computational neuroscience openly accessible, and Senior Scientist Dr. Randy McIntosh co-lead a panel discussion on open innovation and intellectual property.

Dr. McIntosh is also part of the Governing Board of the Ontario Neuroinformatics Consortium, an alliance formed to represent Ontario's open science initiatives as part of the INCF.

Open science at the RRI

By adopting open science principles, we are creating a pathway to accelerate research, discovery, and innovation that will benefit older adults everywhere.

To advance open science, numerous RRI studies now ask research participants for their consent to share their anonymized data in large, international, online databases accessible by other researchers. Many RRI scientists also openly share their research materials, such as their experiments and software code, so other research groups do not have to “reinvent the wheel,” and they publish their studies in open access journals. Finally, we are actively developing principles to train the next generation of scientists to further the field of open science.

Accelerating brain health research across the province

RRI scientists are key players in the Ontario Neurodegenerative Disease Research Initiative (ONDRI), funded by the Ontario Brain Institute. In close collaboration with other provincial and national groups, their focus is on developing computer systems and software for data collection, storage, retrieval, and analysis that enable and accelerate research discoveries in brain diseases such as Alzheimer's disease and related dementias.

Drs. Stephen Strother (Senior Scientist) and Malcom Binns (Statistician Scientist) are on ONDRI's executive steering committee and co-lead the ONDRI Neuroinformatics and Biostatistics (NIBS) platform. The NIBS team has developed techniques and tools to help ensure the production and analysis of high-quality, reproducible data across tens of thousands of complex clinical and research measurements collected across Ontario. One example is the ONDRI foundational study - an in-depth study of 520 people living with one of five neurodegenerative diseases, including Alzheimer's disease, each observed over three years.

Sharing Our Research



MEDIA

RRI researchers engage in media and advocacy efforts to inform the public about the latest scientific findings and their potential impact on health, science, and government policy. As we didn't include a media section in the 2019-2020 report, the small sample of stories highlighted below is from 2019-2021:

- [Aging Well Suzuki Style](#) - RRI scientists and Baycrest researchers, including Dr. Howard Chertkow, Marilyn Reed, Dr. Eugenie Roudaia, and Dr. Allison Sekuler, were featured on the CBC's *The Nature of Things with David Suzuki*
- Dementia symptoms appear to worsen after pandemic restrictions overwrite support routines, families say - Quoted Dr. Linda Mah in the [Globe and Mail](#)
- Daydreaming... ? Oh, huh? How the COVID-19 pandemic has affected our ability to do that too - Quoted Dr. Donna Rose Addis in the [Toronto Star](#)
- Older women who eat more plant-based protein have lower risk for dementia-related death, study says - Quoted Dr. Carol Greenwood in [Zoomer](#)
- Rejuvenate your brain - Quoted Drs. Claude Alain and Jed Meltzer in Good Times Magazine
- CBC Radio across Canada: Dr. Howard Chertkow discussed the pandemic's effects on our brains
- Electric stimulation 'a promising advancement' for reversing memory loss - Quoted Dr. Jed Meltzer on [CTV News](#)
- 'It just feels like a black hole': Getting through work when you're depressed - Quoted Dr. Nasreen Khatri on [Global News](#)
- Brain Beat Dance combines dance, storytelling and conversation to stimulate brain health in GTA seniors - Quoted Dr. Claude Alain in the [Toronto Star](#)
- Delaying onset of Alzheimer's and related dementias - Guest column by Dr. Susan Vandermorris in the [Toronto Sun](#)
- University can be hard. It's even harder when you're 81 and have Alzheimer's - Quoted Dr. Nicole Anderson in the [Toronto Star](#)



2021 ROTMAN RESEARCH INSTITUTE VIRTUAL CONFERENCE

The 2021 Rotman Research Institute Virtual Conference brought together leading experts in the field of aging and brain health to discuss the latest breakthroughs in *Optimizing Cognitive & Behavioural Function in Disorders of the Aging Brain*.

The event featured 16 internationally renowned speakers across four plenary sessions, presenting bold discoveries and holistic approaches to improve quality of life for older adults and their caregivers. Speakers came from leading organizations around the world, including the University of Oxford, Harvard University, the University of Hong Kong, and Baycrest. Presentation topics ranged from the use of brain stimulation to improve language performance in dementia, to reviewing pharmacological advances in the field, and prescribing music therapy or virtual reality for individuals living with dementia.

This year's conference embraced new approaches to build connections among attendees using the virtual *gather.town* platform. Attendees could explore a virtual RRI space with their custom avatars to network and forge new collaborations while listening to talks and visiting poster presentations. Over 330 participants from 15 countries attended the event.

The conference also featured a public event, which was jointly produced by the RRI and the Centre for Aging + Brain Health Innovation (CABHI), with experts from around the world bringing their unique perspectives to discuss how the COVID-19 pandemic has accelerated the development and adoption of innovations. They examined how different technologies, such as robotics, artificial intelligence, and virtual care, can enhance the experience of aging for all both during the pandemic and beyond. They also discussed how technologies need to be balanced with a human element to ensure older adults everywhere are healthy, happy, and thriving in every setting.

Following the conference, leading innovators, entrepreneurs, older adults, and global companies came together at the CABHI Summit 2021: Accelerating Innovation + Amplifying Impact. This collaboration between the RRI and CABHI served as a bridge between research and innovation, and connected researchers with diverse stakeholders.



The RRI virtual conference space on the *gather.town* platform



RESEARCH TRANSLATION

Bringing research to the community

In partnership with the University of Toronto (UT) and Toronto Academic Health Sciences Network (TASHN) hospitals, the RRI is contributing to the UT COVID-19 Biobank - a safe, secure, and standardized collection of samples and data from more than 57,000 Canadians, including patients with COVID-19, family members, healthcare professionals, and controls. The UT COVID-19 Biobank will leverage already-established infrastructure, scientific collaborations, and sharing of data to increase the impact of research results. RRI scientists will lend their expertise by developing and managing a mobile testing centre, broadening and diversifying collection of biobank samples, and enabling collection of behavioural and neuroimaging data, memory assessments, and eye tracking data. These data will be critical to answering a range of research questions about COVID-19's impacts on brain health across the age span, from children to older adults.

This work is supported by the Canada Foundation for Innovation's (CFI) Exceptional Opportunities Fund, and the Canadian Institutes of Health Research (CIHR).

Using virtual reality to train clinicians

With support from the Kunin-Lunenfeld Centre for Applied Research & Evaluation (KL-CARE) and the Ottawa Hospital Research Institute, this year the Michener Institute of Education and Baycrest's Centre for Education developed and tested an innovative virtual reality (VR) platform and simulation curriculum. The platform included a virtual clinic setting and a trained professional who role-played ("simulated") a person with dementia exhibiting responsive behaviours, including yelling and object throwing. Baycrest clinical staff and students were recruited to interact with this simulated patient in VR by applying their de-escalation skills. Preliminary

data demonstrated the usability, feasibility, and effectiveness of this VR innovation for de-escalation training, allowing clinicians to practice their de-escalation skills in a realistic environment while maintaining their physical safety. Baycrest is currently working to incorporate this VR application into their educational initiatives.

This project was funded by the Centre for Aging + Brain Health Innovation (CABHI).

Bridging brain health research and policy

RRI scientists are leveraging their expertise to improve health policies related to aging, brain health, and dementia. As part of the fifth Canadian Consensus Conference on the Diagnosis and Treatment of Dementia, Drs. Nicole Anderson (Director of the Ben and Hilda Katz Inter-Professional Research Program in Geriatric and Dementia Care) and Howard Chertkow (Baycrest's Chair in Cognitive Neurology and Innovation, and Director of the Kimel Family Centre for Brain Health and Wellness and the Anne & Allan Bank Centre for Clinical Research Trials) contributed to the development of research-based, dementia guidelines and recommendations for Canadian policymakers, clinicians, and researchers. Their recommendations provide guidance around screening for, detection, and diagnosis of Alzheimer's disease and related dementias, as well as individual and community-based psychosocial and non-pharmacological interventions, such as exercise and cognitive stimulation, for persons living with dementia and their caregivers.

This work was funded in part by the Canadian Consortium on Neurodegeneration in Aging, the *Réseau des cliniques mémoire du Québec*, and the *Réseau Québécois de Recherche sur le Vieillessement*.

Fundraising Spotlight: Women Friends of Baycrest



Dr. Donna Rose Addis

Dr. Nicole Anderson

Dr. Linda Mah

Dr. Rosanna Olsen

Now in its seventh year, Women Friends of Baycrest (WFB) is a motivated group of supporters who believe in community and a cause. Together, they have raised hundreds of thousands of dollars to help Baycrest lead the way in care and research on aging and brain health. They also create special memories by organizing events that engage and enlighten.

The focus of WFB in 2020-2021 has been on the amazing female scientists from Baycrest's Rotman Research Institute, who are working to solve the mysteries of the human brain with research on the prevention, detection, and treatment of dementia.

Central to the activities of the year, WFB created a new Woman Scientist of Distinction honour. Dr. Allison Sekuler, Vice-President, Research, kicked off a series of virtual events for members of WFB with a presentation about the RRI and research from her lab. She then unveiled the four finalists for the Woman Scientist of Distinction honour: Drs. Donna Rose Addis, Nicole Anderson, Linda Mah, and Rosanna Olsen. Each scientist met with WFB to share information about their research.

After meeting all of the scientists, members voted Dr. Mah as the 2021 Woman Scientist of Distinction. Dr. Mah's research focuses on advancing our understanding of the relationship between cognition and emotion in healthy aging and in disorders of older adults, and applying this knowledge to improve the diagnosis and treatment of disorders associated with later life. Since mood disorders such as depression are known to increase the risk of developing dementia, this work is critical to improving quality of life and well-being for older adults everywhere.

We thank the WFB for their interest in and support of research, and for providing a platform to highlight the exceptional work of our women scientists.

Thank You to Our Generous Funders 2020-2021



We thank the Baycrest Foundation for their continued support of research at the RRI.

To donate to research, visit baycrest.org/supportresearch or contact Tyler Small, Manager, Major Gifts, at 416-785-2500, ext. 5461.

External funders

Alberta Innovates

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BrightFocus Foundation

Canada Foundation for Innovation

Canada Research Chairs Program

Canadian Consortium on Neurodegeneration in Aging

Canadian Institutes of Health Research

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Canadian Partnership for Stroke Recovery

Centre for Addiction and Mental Health

Centre for Aging + Brain Health Innovation

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Ontario Brain Institute

Ontario Ministry of Economic Development, Job Creation and Trade

Ontario Ministry of Health and Long-Term Care

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Social Sciences and Humanities Research Council

Toronto Community Foundation

University of Toronto

William Deman Foundation

Women's Brain Health Initiative

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