

THE MCGILL UNIVERSITY RESEARCH CENTRE FOR STUDIES IN AGING (MCSA)



November 2022 – 18TH EDITION



Keeping you updated on the latest news, events, and research achievements!

The scientific achievements from last year were possible thanks to the active participation of our patients, their relatives, and friends. Together, we advance clinical science towards new therapies for Alzheimer's Disease.

WORLD ALZHEIMER REPORT 2022



World Alzheimer Report 2022

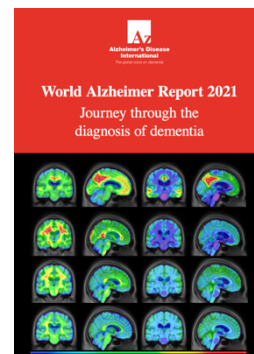
Life after diagnosis:
Navigating treatment, care and support

In the follow-up of last year's World Alzheimer Report on the diagnosis of Alzheimer's disease, this year's report focused on post-diagnostic support under guidance from the team that produced last year's report: Dr. Pedro Rosa-Neto, Dr. Serge Gauthier, Dr. Jose Morais, Dr. Stijn Servaes, Claire Webster, and Alzheimer's Disease International (ADI).



Whilst the World Alzheimer Report 2021 gave insights into the earlier and biological diagnosis of dementia, the World Alzheimer Report 2022 focuses on post-diagnostic care of dementia. Apart from describing the natural progression of dementia (dementia stages) and indicate how to manage symptoms as they emerge over time, the 2022 report also highlights the impact of diagnosis on persons living with dementia, family and informal carers as well as clinicians. Furthermore, the 2022 report also reviews the current non-pharmacological interventions, new models of care around the world, and

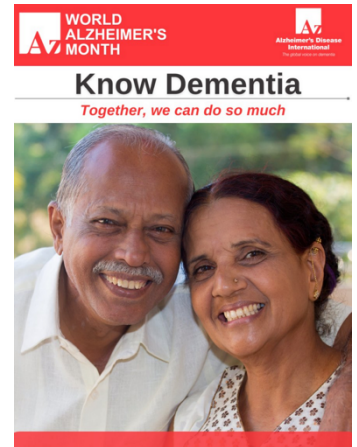
emphasizes the need and ways to increase educational opportunities for healthcare professionals, persons living with dementia and their care givers. Finally, the report explores strategies for best use of the new drugs while modifying lifestyle to mitigate risk factors.



To accurately represent the experience people have had on their journey after a diagnosis of dementia, three surveys were carried out by McGill and ADI targeting specific groups – informal carers, professional carers, and persons living with dementia. These surveys were conducted in seven languages (English, Chinese, Spanish, French, Portuguese, Japanese, and Arabic). In total, surveys collected responses from 1,669 informal carers in 68 countries, 893 professional carers in 69 countries, and 365 people with dementia from 41 countries.

People living with dementia in both high- and lower-income countries indicated that they most often received the same types of information upon receiving a diagnosis. Across this survey group, 52% indicated that they were prescribed a dementia-specific medication. Thirty-four percent were advised to contact their local Alzheimer or dementia association, and 28% were advised on nutrition and exercise. Informal carers across both lower- and higher-

income countries indicated that they received similar information at the time of diagnosis. However, a surprisingly high number of people living with dementia indicated they had not been offered post-diagnosis support beyond the initial information provided immediately after their diagnosis. In lower-income countries, 45% indicated they had not been offered support, while 55% reported they had. In higher-income countries, although 63% reported having been offered post-diagnosis support, 37% indicated they were offered nothing. In addition, 64% of people living with dementia indicated they did not have a personalized care plan – a roadmap indicating how they would want to receive care throughout the progression of their condition– with 36% reporting they had. This was pretty much consistent across lower- and higher-income countries.



The persons living with dementia answered a question about how often they feel stressed or anxious about their diagnosis of dementia after disclosure: 46% of them said they felt stressed or anxious “some of the time”, while another 34% said either “often” or “all of the time”. Informal carers indicated that stress was a very common factor while trying to cope with their caring responsibilities: 54% of them said they felt stress either often or all the time, 39% said they felt stress some of the time, while only 8% of informal carers said they rarely or never felt stress. Stress was also a common factor with paid health and long-term care professionals who responded to the questionnaire.

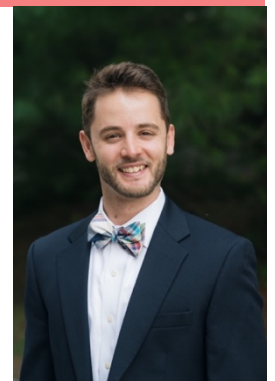
The current World Alzheimer’s Report is, to our knowledge, the most comprehensive exploration of post-diagnosis dementia support, providing a mixture of expert essays and experiences from people dealing with a diagnosis of dementia. A first webinar under the auspices of Alzheimer Disease International took place on September 21st involving S. Gauthier and C. Webster, and a second webinar will take place on November 8th involving J. Morais and P. Rosa-Neto.



The World Alzheimer Report 2022 can be downloaded on the ADI website: <https://www.alzint.org/resource/world-alzheimer-report-2022/> or on McGill Steinberg Centre for Stimulation and Interactive Learning: <https://www.mcgill.ca/medsimcentre/community-outreach/dementia/world-alzheimer-reports>

MCSA COLLABORATOR: DR. CHRISTOPHER NIEMCZAK, AUD, PHD

With a clinical and research background in auditory neuroscience focused on auditory cortical processing in background noise, I am excited to join the team at the McGill University Research Center for Studies in Aging. Through my clinical training, I have expertise in diagnostic central and peripheral auditory tests, as well as experience providing auditory rehabilitation in those with various auditory deficits across the lifespan. My research interests include understanding the cortical processes involved in speech perception in varying background noise. Difficulty perceiving speech in background noise is the most common complaint in the audiology clinic. My previous work was focused on exploring the auditory



cortical pathway to examine acoustic, linguistic, and cognitive factors that lead to difficulty perceiving speech in background noise.

I have a wide range of tools, from behavioral speech perception in noise (SPiN) measures to auditory electrophysiology, to understand and assess the cognitive underpinnings involved in central auditory processing. I am currently a Scientist at Dartmouth-Hitchcock Medical Center and Assistant Professor of Medicine at Geisel School of Medicine. During my time at Dartmouth, I have worked with Dr. Jay Buckley to study how the cortical auditory system could be used to track the neurocognitive effects of HIV infection. The cross-sectional and longitudinal results show a relationship between central auditory processing and neurocognitive function in people living with HIV. The results suggest that central nervous system damage from HIV infection or treatment is reflected in central auditory processing, specifically SPiN. My work with the McGill University Research Centre for Studies in Aging builds logically on my previous work with HIV and the auditory system by expanding previous findings using speech babble masking (i.e. informational masking) to tax the auditory system in those with mild cognitive impairment (MCI). SPiN with informational masking reflects the outcome from numerous demanding cognitive processing tasks from the cochlea to the cortex. The goal of our work at McGill, which aligns well with my research interests, is to leverage the auditory system as a window into neurocognitive function augmenting traditional neurocognitive assessments providing a sensitive and specific measure for identifying neurocognitive deficits in MCI. I am an early career researcher with the goal of developing an independent and externally funded research program focused on exploring auditory neural pathways to understand and assess clinically relevant populations, such as those with HIV, hearing loss, Alzheimer's Disease, and COVID-19.

FEATURED ASSOCIATE RESEARCH MEMBER – DR. BERNARD ROBAIRE, PHD FRSC FCAHS



Bernard Robaire received his B.A from UCLA and his Ph.D. from McGill University. After a postdoctoral fellowship at Johns Hopkins University, he returned to McGill to take up a joint appointment in the Departments of Pharmacology & Therapeutics and of Obstetrics & Gynaecology where he has remained and is currently a James McGill Professor. Dr. Robaire's research interests focus on aging of the male reproductive system, spermatogonial stem cells, male-mediated reproductive toxicology, mechanisms of androgen actions, and the structure, function, and regulation of the epididymis. This research activity has resulted in over 230 journal articles, 70 book chapters, and editing/co-editing of 10 books. He conceived and has been co-Editor of both editions of the Handbook of Andrology. He has mentored many graduate students (30 PhDs, 10 MSc) and over 20 Postdoctoral Fellows, most of whom have gone on to have successful careers in academia, industry and

government. His team's work has been funded by the CIHR/MRC continuously since he opened his lab as well as by the NIH, March of Dimes, FRQNT, FRQS, and the private sector.

He has served on peer review committees for numerous agencies including NIH, CIHR, CAAT, FRQNT, FRQS and has been an active member of the Advisory Board of CIHR's IHDCYH. Honors awarded to Dr. Robaire during his career include the Award for Excellence in Reproduction from the Canadian Fertility and Andrology Society (CFAS) and the Distinguished Academic Award of the CAUT. He received both of the highest recognitions from the American Society of Andrology (ASA): the Distinguished Service Award and the Distinguished Andrologist Award, as well as the Jansen Distinguished Service Award of the Society for the Study of Reproduction. Over the last few years, he was awarded

the R. Howard Webster Foundation Award in Reproductive Medicine, the Prix du Mentor Scientifique (CRCQ), the Prix Guy Rochon (FQPPU), the Gabriel Plaa Award of Distinction of the Canadian Society of Toxicology. He is a Fellow of the Royal Society of Canada and of the Canadian Academy of Health Sciences. He has served as President of ASA, CFAS, ACFAS, MAUT and the International Epididymis Symposium; he is currently Chair of the North American Testis Workshop Executive. He has served as Associate Editor, Co-Editor-in-Chief, and Consulting Editor of *Biology of Reproduction* and as Associate Editor of *Andrology*.

CONGRATULATIONS TO MCSA ASSOCIATE MEMBER DR. MICHAEL WISEMAN

MCGILL'S UNSUNG HERO

Dr. Michael Wiseman is an Associate Professor, McGill University Faculty of Dentistry. He has lectured nationally and internationally to dental conventions on geriatric dentistry and medicine. He was a founder of the McGill Outreach Program which provides free dental care to Montreal's disadvantaged community. His past research involves studies evaluating oral care in functionally dependent dementia patients, salivary flow in Parkinson's Disease, and is currently evaluating the oral status of psychiatric patients. As an Associate Professor at McGill University, Dr. Wiseman instructs dental students on the proper care of involved in geriatric dentistry. He has a private practice in Cote St. Luc and is on staff at a variety of Montreal hospitals. For the past 20 years, Dr. Wiseman has been a key member in organizing MCSA's outreach program with the Education Committee. He is the father of three wonderful children and celebrates over 30 years of marriage to his wife Belaine.



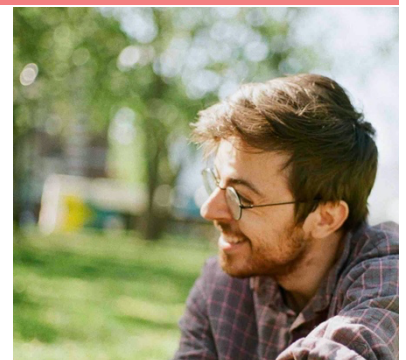
This year, as part of McGill's Bicentennial Celebrations, the McGillian community was asked to nominate the unsung heroes of various faculties that have made an impact not only in their respective departments, but in the community. Dr. Wiseman was nominated by one his former students in the Faculty of Dental Medicine and Oral Health Sciences. In his 28 years of being an educator, Dr. Wiseman has always made an impact on his students. Dr. Wiseman has taken the effort to organize important and meaningful trips for his students, bringing them out of the classroom, to learn in a different environment and most importantly, gave them opportunities to engage with patients and learn about their life experiences. Dr. Wiseman won the title of being an 'unsung Hero' by inspiring his students to be advocates for their patients, to be passionate about patient-centered dentistry and how to contribute to society as a health care professional.

GET TO KNOW OUR POST DOC AND PHD STUDENTS!

Joseph Therriault

I am a PhD student supervised by Dr. Pedro Rosa-Neto. My research focuses on understanding Alzheimer's disease, with a specific emphasis on the preclinical phase. Because Alzheimer's disease is characterized by brain changes up to 20 years before the symptoms of the disease start, we think that treating the disease in the preclinical phase has the best chances of success.

At the MCSA, I have also developed staging systems for Alzheimer's disease that can be applied to living people, which will help scientists and doctors understand how to



give the right therapy to the right person at the right time. Most recently, we are working on blood tests for Alzheimer's disease to be able to catch the disease early.

Our work at the center under the supervision of Dr. Rosa-Neto has made large impact across the world. Last year, I received the Forbes 30 under 30 award for my contributions to the study of Alzheimer's disease, and this year I received the Alavi-Mandell award for outstanding contribution to nuclear medicine. My work is made possible by a grant from the Canadian Institutes of Health Research.

I have been working at the Centre since 2017, and soon will graduate. The next step for me is to study medicine so that I can train as a physician-scientist, similar to what Dr. Rosa-Neto does, seeing patients and running a lab to advance the understanding of neurological disease.

NEW STAFF AND STUDENTS

Seyyed Ali Hosseini, PhD Candidate

My name is Ali, and I'm a PhD candidate at McGill university. I have recently joined the Translational Neuroimaging Laboratory at the McGill University Research Centre for Studies in Aging in September 2022. I studied medical imaging as my BSc degree at Shahid Beheshti University, Tehran, Iran, and gained an in-depth knowledge of all sorts of medical imaging modalities. I got my MSc in medical physics from the Tehran university of medical science, Tehran, Iran. I worked on applying artificial intelligence (AI) in medicine during those three years. Studying medical imaging during my BSc degree on one side and working on AI in my MSc degree on another side have made me generally at the forefront of the fields and aware of the most up-to-date advances in treatments and personalized medicine for patients.



I have more than eight years of scientific and professional work experience, including medical imaging, computer programming (Python, Matlab, R), statistical data analysis, and artificial intelligence (machine/deep learning). I am interested in radio/genomics, AI, and computational medical imaging. I am also interested in data acquisition and pre- and post-processing medical image data. I am currently working on multi-modal radiomics model and AI for diagnosing, prognosing, and determining Alzheimer's Disease and dementia.

Tahniah Nazneen



Tahniah is a Biomedical Engineering graduate from Bangladesh who joined the research team as a Master's student in January 2022. She is working on statistical methods to improve reproducibility and reduce technical variability in heterogeneous multimodal and multicenter neuroimaging studies of Alzheimer's Disease.

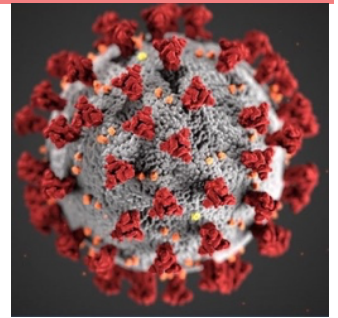
SCREENING OF NEUROBEHAVIORAL ABNORMALITIES IN THE AGING POPULATION



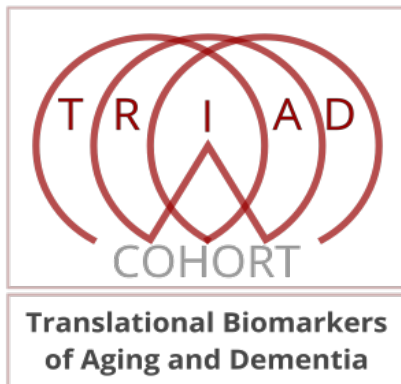
SNAP (Screening of Neurobehavioral Abnormalities in the aging Population) is a virtual cognitive assessment tool designed to screen for dementia at early stages. SNAP features a website that provides free online cognitive assessment and encompasses a comprehensive approach towards the study of variables associated with neurodegenerative disease in elderly population. SNAP consists of 2 memory track tasks meant to provide an estimate on the integrity of the participant's episodic memory. A series of games to be played is included in the memory track to allow a delayed-recall testing.

COVID-19 AND CLINICAL TRIALS AT THE MCSA

The physicians of the Alzheimer's Disease Research Unit and Dr. Pedro Rosa-Neto, Director of the McGill University Research Centre for Studies, believe that remote technologies for assessing patients in clinical trials seem to be a reasonable alternative for the continuation of data collection. The disruption of important clinical research by the COVID-19 pandemic is linked also to the particular vulnerability of the older adults; the most targeted subjects by COVID-19. At MCSA, two clinical trials on autosomal dominant Alzheimer's Disease (DIAN-TU-001 and DIAN CRI) are currently in recruitment. Our team will answer all questions in regard to clinical trials and if you are interested in obtaining more information and/or participating in one of our clinical trials please do not hesitate to contact Tamar Tatigian and Abir Chamoun at 514-761-6131 x6314 or email: info.mcsa@mcgill.ca



WHAT IS THE TRIAD COHORT?



The Translational Biomarkers in Aging and Dementia (TRIAD) cohort is a longitudinal observational cohort specifically designed to study mechanisms driving dementia. The cohort studies dementia markers and their progression from pre-symptomatic stages to the onset of Alzheimer's disease or other types of dementia. TRIAD participants are followed in a longitudinal manner with clinical and neuropsychological assessments, fluid and imaging biomarkers every 24 months. Results generated from the TRIAD cohort help advance scientific knowledge and develop better targeted clinical trials to cure Alzheimer's Disease and dementia. The TRIAD cohort is actively recruiting participants, for more information about the participation criteria and the different measures please refer to <https://triad.tnl-mcgill.com>, to get additional information or to participate call our research centre 514-761-6131 ext: 6321. For research participants and sponsors

that are interested in donating to the TRIAD Cohort Research Study, please contact Jenna Stevenson by email jenna.stevenson2@affiliate.mcgill.ca

WHY YOUR DONATIONS ARE SO IMPORTANT



Between 2020-2022, our fundraising activities were impacted by the pandemic. Your continued support and encouragement were crucial and have played a central role in the continued success of the Centre's outreach, research infrastructure objectives, and medical research initiatives for the community. The first edition of the Brainsy Boomer Cookbook, written by you—our MCSA Community—helped us raise \$27,500.00! **We thank you for your loyal and on going support!** Thank you for helping us advance our mandate towards prevention, aging research, and education. Income tax receipts shall also be issued for all donations exceeding \$15.00. If you



would like to donate by mail, phone or email, please contact Silvana Aguzzi at 514- 761-6131 X 6308 or by email silvana.aguzzi@mcgill.ca or Alexandra Triantafillopoulos at 514-761-6131 X 6311 or by email alexandra.triantafillopoulos1@mcgill.ca

DEMENTIA, YOUR COMPANION GUIDE

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A free new educational resource, *Dementia, Your Companion Guide*, was designed to help provide answers. With engaging illustrations and a friendly writing style, this approachable guide covers a wide array of topics to assist both the person living with dementia (PLWD) and their care partners. It includes information on the science and progression of dementia as well as practical advice on safety and self-care. The Book is available in English, French, Spanish, Chinese and Greek.

The guide was created by a multidisciplinary team at the McGill University **Dementia Education Program** (DEP) in the Faculty of Medicine and Health Sciences (FMHS). The content was provided by the Program's founder and former care partner **Ms. Claire Webster**, geriatrician **Dr. José A. Morais** and neurologist **Dr. Serge Gauthier**, along with partners from the McGill University Research Centre for Studies in Aging, the Division of Geriatric Medicine, the School of Physical and Occupational Therapy, and the School of Social Work.

Ask for a copy of the book at your next appointment at MCSA or Crossroads! Or Visit:
<https://www.mcgill.ca/medsimcentre/community-outreach/dementia>

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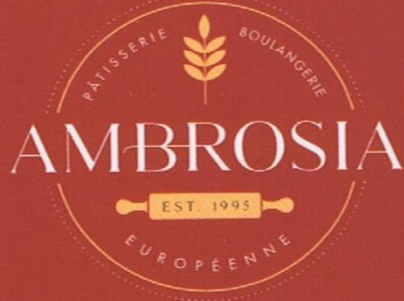
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THE BRAINY BOOMERS COOKBOOK – SECOND EDITION

The McGill University Research Centre for Studies in Aging (MCSA)
Presents:

The Brainy Boomer Cookbook – Second Edition

After the success of the first edition of the Brainy Boomers Cookbook, we are looking for original, traditional, diverse and multicultural recipes to bring the flavours and fragrances of the holiday season to the entire McGill community.

With a donation of \$25 or more, you will receive a Brainy Boomers holiday apron and a copy of the cookbook with delicious recipes by email or mail. The MCSA Education Committee will also award 3 prizes if your recipe is selected and you are a finalist in one of the following categories:

- Appetizers
- Main Dishes (including soups, salads and vegetables)
- Desserts

Send us a photo of the completed dish, list of ingredients and instructions (brainy.boomer-mcsa@mcgill.ca) and tell us why you chose it and why it is so special to you! You have until November 14th, 2022 to submit your favorite recipe!



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