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

RESEARCH ACHIEVEMENTS

The TRIAD (Translational Imaging in Aging and Dementia) cohort is a population-based study developed at the McGill University Research Centre for Studies in Aging. The TRIAD cohort is designed to study the most important biomarker changes that are involved in aging and brain disorders such as Alzheimer’s Disease. Participants undergo cognitive tasks, MRI scans and PET scans every two years. The TRIAD cohort will serve as a benchmark for understanding what proteins become abnormal in patients with neurodegenerative diseases. Results from the TRIAD study will be used to guide future disease-modifying trials against Alzheimer’s Disease and other disorders. If you are interested in participating, call 514-761-6131 x 6321.

NEW RESEARCH DONOR WALL – TRIAD COHORT CROSSROADS PAVILLION 6775 LASALLE BLVD VERDUN QC H4H 1R3

For research participants and sponsors that are interested in donating to the TRIAD Cohort Research Study, please contact Alexandra Triantafiloopulos at T: 514-761-6131 x6311 or email alexandra.triantafiloopulos1@mcgill.ca.

The goal of the study is:
- To better understand Amyloid and Tau proteins present in the brain
- To understand the role of inflammation in the brain in normal aging and in Alzheimer’s Disease
- To develop Research methodologies which can diagnose Alzheimer’s Disease at earlier stages

AWARDS 2018-2019

Dr. Pedro Rosa-Neto and Dr. Serge Gauthier, for the 5 year funding by the Fonds de Recherche en Santé (FRSQ) for the TRIAD/BioVie COHORT.
Back Row: Dr. T. A. Pascoal, Dr. N. Qureshi, C. Tissot- Front Row: J. Therriault, F. Lussier, A. Benedet

BRAIN & BRAIN PET 2019 JAPAN CONFERENCE: Travel Awards

- Dr. Tharick Ali Pascoal, MD, PhD, Neurologist
- Dr. Muhammad Naveed Iqbal Qureshi
- Joseph Therriault, BA, PhD candidate
- Andrea Lessa Benedet, MSC, PhD candidate
- Cécile Tissot, BSc, MSc candidate
- Firoza Lussier, BSc, MSc candidate

AAIC 2019 – LOS ANGELES, CA AWARDS:

- Dr. Tharick Ali Pascoal, MD, PhD, Neurologist – Preconference Award
- Andrea Lessa Benedet, MSC, PhD candidate - Full conference, travel and accommodation Award
- Joseph Therriault, BA, PhD candidate – Preconference Award
- Firoza Lussier, BSc, MSc candidate Full conference registration Award

CIHR TRAVEL GRANT:

- Cécile Tissot, BSc, MSc candidate ($1000)

MARIE GUYERE TRAVEL AWARD, Douglas Mental Health University Institute:

- Joseph Therriault, BA, PhD candidate ($500)

2019: BRAIN & BRAIN PET & AAIC CONFERENCES

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<th>Year</th>
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<td>2019</td>
<td>Against Dementia, Singapore (ASAD)</td>
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<td>December 4-7, 2019</td>
<td>The Clinical Trials in Alzheimer’s Disease, San Diego (CTAD)</td>
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MCSA Research Team – Brain & Brain Pet 2019 Yokohama Japan

Dr. Pascoal, Dr. Qureshi, C. Tissot, A. Benedet, J. Therriault

MCSA Research Team – AAIC 2019 A. Benedet, F. Lussier, J. Therriault, Dr. Pascoal, C. Tissot, Dr. E. Thomas, J. Stevenson, Dr. Rosa-Neto, S. Mathotaarachchi

F. Lussier, C. Tissot, J. Stevenson, Dr. Rosa-Neto, J. Therriault, Dr. Pascoal

Dr. Tharick Ali Pascoal, MD, PhD, Neurologist Title: “Longitudinal evaluation of tau propagation using [18F] MK-6240.”

The presentation of Dr. Pascoal consisted of the first longitudinal evaluation of a new image tool that visualizes the in-vivo brain tau protein, which is one of the culprits of Alzheimer’s Dementia, with great sensitivity. In this study, Dr. Pascoal showed that Tau protein accumulates in the brain of Alzheimer’s Disease patients and also in some cognitively intact elderly subjects that are probably in pre-dementia stages of Alzheimer’s Disease. This study opens the door for preventive treatments in cognitively intact individuals using therapies aiming to prevent tau protein progression, which brings hope to prevent the progression of Alzheimer’s Disease.

Dr. Muhammad Naveed Iqbal Qureshi, PhD –Title: “Functional Connectivity Investigation in Alzheimer’s Disease using PET and fMRI Imaging.”

The brain functional decline with the progression of Alzheimer’s Disease (AD) is one of its biggest Hallmarks. Here, we examine the decline of functional connectivity associated with brain Tau and Amyloid protein aggregates in AD patients. We hypothesized that the protein aggregates deposition in the control normal should be minimum and gradually increase in the MCI and AD groups i.e., AD > MCI > CN and it corresponds to an exactly opposite pattern of decline in the resting state functional connectivity i.e., CN > MCI > AD.
Amyloid and Tau are two proteins that define Alzheimer’s Disease. However, because they occur in different brain regions, it is not known how they interact to affect clinical symptoms of the disease. With this project, we show that areas of the brain that have both pathologies are more vulnerable to neurodegeneration.

The syndrome of mild behavioral impairment (MBI) was found to be correlated with increased deposition of Beta-Amyloid and Tau proteins, Alzheimer’s Disease biomarkers, even in elderly persons without any cognitive symptoms.

Joseph Therriault, BA, PhD Candidate
Title: “Amyloid-dependent and Amyloid-independent effects of Tau on clinical status.”

Andrea Lessa Benedet, MSc, PhD candidate – Title: “Associations between plasma NFL and PET biomarkers of Alzheimer’s Disease.”

Jenna Stevenson, BA
Title: “The Translational biomarkers in Aging and Dementia: TRIAD, a biomarker oriented cohort.”

Min Su Kang, BSc, PhD Candidate
Title: “[18F] FDG is associated with CSF neurofilament light chain in mild cognitive impairment.”

Dr. Émilie Thomas, PhD
Title: “Association between Neuroinflammation (level) and verbal and visual memory performance in high affinity binders.”

The objective of this study was to determine, in living patients, whether the neuroinflammation load is associated with verbal and visual memory performance in a sample of high affinity binders for PBR28 (a neuroinflammation tracer). The sample included 49 cognitively unimpaired elderly (CU), 12 people diagnosed with mild cognitive impairment (MCI) and 12 with Alzheimer’s Dementia. All participants underwent positron emission tomography (PET) for neuroinflammation, Tau aggregates and Amyloid-Beta (Aβ) load. The results indicate that even if the impact of neuroinflammation on cognition is not as strong as the impact of tau aggregates, neuroinflammation still plays a role in memory performances. In addition, besides a deleterious effect on cognition, our preliminary results suggest that there might also have a protective effect of neuroinflammation on cognition. These findings are especially important for the development of effective disease modifying therapies for Alzheimer’s Disease.
MCSA and CrossRoads Staff and Students

MCSA held its Annual BBQ fundraiser on Wednesday, June 12, 2019 to thank all of the Donors for their generosity and support throughout the past year. This year’s event was the most successful for attending participants. Dr. Rosa-Neto, Dr. Gauthier, and Dr. Vitali welcomed all guests and began the evening with a brief summary of the Centre’s accomplishments.

Swingaro – Music Quartet Band
Members: Antoine Marasco, Thomas Morelli-Bernard, Juliette Malgrange and Tyler Parent

AWARDS 2019

Dr. P. Vitali, MD, PhD, FRCPC, Dr. S. Gauthier, C.M., C.Q., MD, FRCPC, Dr. P. Rosa-Neto, MD, PhD, Dr. D. Dastoor, PhD

The 2019 MCSA Lifetime Achievement Award was awarded to Dr. Dolly Dastoor for her work in Dementia Care since 1973 when she joined the Douglas Hospital Geriatric Services as a clinical psychologist. She became involved with Alzheimer Research and was one of the founders of the Alzheimer Society of Montreal and then its President and later the Vice - President of the Alzheimer Society of Canada. She developed with Dr. Martin Cole, the Hierarchic Dementia Scale (HDS), and her 1998 Ph.D thesis was on Rate and Predictors of Decline in Dementia of the Alzheimer Type as measured by the HDS.

She was instrumental in developing at Douglas Hospital, the first in Quebec, The Program in Dementia with Psychiatric Co-morbidity which provided a continuum of care model with a Day Centre, Memory Clinic and an 18 bed unit. Dolly was the Clinical Administrator of this program from 1998 until her retirement in 2013.

At present she is Assistant Professor of Psychiatry at McGill University and a member of the McGill University Research Centre for Studies in Aging. She chairs the MCSA Education Committee where the Brainy Boomer lecture series were developed in 2007, to disseminate information on different aspects of ageing, developments in dementia research and care to the public especially to families dealing with this disease. Annual Health Days and bi-annual Symposia are held under the auspicious of the MCSA Education Committee.

“This Award is given to express deep appreciation for providing leadership as Chair of the MCSA Education Committee, your contribution in research, and your lifetime commitment towards progress against Dementia”

The 2019 MCSA Service Award Award was awarded to Tamar Tatigian, Medical Secretary at the McGill University Research Centre for Studies in Aging (MCSA) for the past 28 years. During the awards ceremony, she received the 2019 MCSA Service Award. Awarded by Dr. Pedro Rosa-Neto, Dr. Serge Gauthier, and Dr. Paolo Vitali, this award recognized Tamar’s decades-long devoted service to the growth and success of MCSA. Tamar considers it a high privilege to work with the outstanding and diverse MCSA staff and students from all over the world and thanks the MCSA for this award.

Merci aux Commanditaires/Thank you to our sponsors!!!!
tissue, from epileptic patients who underwent surgery for medically intractable seizures, and necropsy controls, and correlating this with changes in synaptic density.

**INTERNATIONAL VISITORS**

**Zainab Abalkhail**

joined MCSA in May 2019 and works as a Psychometrist at Crossroads Pavilion. She conducts neuropsychological and cognitive evaluations for the participants. She enjoys spending her time with the participants and making sure they feel comfortable and relaxed. She feels happy to see participants enjoying their time and sharing their smiles with everyone around.

**Paul Bakchine**

Medical Student from Reims, France visited the McGill University Research Centre for Studies in Aging for a one-month observership (July 2018) with Dr. Serge Gauthier. As a 4th year medical student, Mr. Bakchine valued the experience that he gained at MCSA, and felt fortunate for having the opportunity to meet professionals with different roles such as: clinical approach, programming analysis, new treatments and diagnostic testing.

**Eva Wachtelaer, M.Sc. student**

Eva was an exchange student from Belgium, from November 2018 to May 2019, performing her master’s thesis in our research group. She currently investigates the role of brain iron deposition in Alzheimer’s Disease. She uses Magnetic Resonance Imaging (MRI) methods to relate iron values to the healthy aging brain and AD pathophysiology to improve the understanding of the disease.

**Nesrine Rahmouni**

graduated in Biochemistry and molecular medicine at Université de Montréal. Nesrine joined MCSA in May 2019 as a research assistant under the supervision of Dr. Pedro Rosa-Neto, working on research projects and laboratory experiments.

**Maria Zimmerman**

joined MCSA in June 2019 under the supervision of Dr. Pedro Rosa-Neto. Maria is an undergraduate student at McGill University in the Faculty of Science. Maria will be working on an Autoradiographic study, quantifying mGLUR5 receptors in hippocampal and neocortical human brain tissue.

**Lucas Ceolin, Giulia Cenci, Medical Students and Dr. Caroline Calice da Silva, PhD - Director of PostGraduate Programs; School of Medicine Professor.**

Researchers from Brazil visited the McGill University Research Centre for Studies in Aging in June 2019. They are from IMED University, based in Passo Fundo. Dr. Caroline Calice da Silva, PhD, is the Director of Postgraduate Programs and Professor at the School of Medicine and Lucas and Giulia are undergraduate students. Their visit was to observe and learn how to conduct clinical trials. They aspire to apply this knowledge in Brazil and to be able to collaborate with the McGill University Research Centre for Studies in Aging.

International Medical Student Lorenzo Bresciani, from Humanitas University, Milano, Italy will be visiting MCSA in August 2019 for one month to complete a medical student observership.

**The Daughters of Penelope – 1st Fundraiser in support of Alzheimer Disease – Triad Cohort – October 20, 2019**

The event, An Evening in Monte Carlo, will take place on Sunday, October 20, 2019, at the Palace Convention Centre, 1717 blvd Du Corbusier, Laval, QC H7S 2K7. If you would like to attend the fundraiser please contact T: 514-761-6131 X 6311 Alexandra Triantafillooulos for ticket information.

**Associazione Spignese di Milano 3rd Annual Alzheimer Fundraiser Event – November 2, 2019**

If you would like to attend the fundraiser please contact T: 514-761-6131 x 6308 Silvana Aguzzi for ticket information.

**MEMORY CLINIC: ALZHEIMER’S DISEASE RESEARCH UNIT**

Alzheimer’s Disease Research Unit Director Dr. Serge Gauthier and Dr. Pedro Rosa-Neto, Director of the McGill University Research Centre for Studies in Aging, utilize the best clinical practices and cutting-edge technologies for diagnosis of medical conditions associated with memory problems. The Memory Clinic is actively involved in cognitive research and is recognized internationally as a Clinical Trial Site. Clinical trials (Phase II-IV) that test the efficacy and safety of experimental drugs for AD and other cognitive disorders are ongoing. The MCSA is in the process of recruiting for 2 different clinical trials on Alzheimer’s Disease and one observational study on Dementia. Our team will answer all questions on the above studies in regards 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 at 514-761-6131 x6314 or email: info.mcsa@mcgill.ca.

We appreciate your continued support to our Centre! To achieve all of our objectives and to continue to play an important role in aging research in Quebec and Canada, we always need your help. In order to advance in our mission and mandate towards (1) prevention, (2) major focus of aging research, and (3) commitment in investigating causes and new treatments of the dementias, we count on your continued support. We thank all of our Donors for their encouragement and confidence in our work which contributes to the preservation of the highest levels of research, education, and teaching in the field of aging. We are happy to accept donations that will support our research efforts.

We will issue a receipt for tax purposes for all donations above $15.00. In addition, every donor whose gifts exceed $500 will be honored by receiving a permanent inscription on our Donor Wall. If you would like to make a donation by mail, phone or email, please contact Alexandra Triantafillopolus at 514-761-6311 or By Email: alexandra.triantafillopolus1@mcgill.ca or silvana.aguzzi@mcgill.ca.

We would like to express our deepest gratitude to all of our Donors and are grateful for your continuous support and interest in the Centre’s research and knowledge outreach programs. Thanks to Donors like you we can continue our mission in investigating causes and treatments of the dementias, especially Alzheimer’s Disease. Your support is extremely important to us and we encourage you to spread the word on social media in helping with our cause.

Dr. Pedro Rosa-Neto, Director of the McGill University Research Centre for Studies in Aging, Dr. Serge Gauthier, Director of the Alzheimer Disease Research Unit/Memory Clinic and the MCSA Team would like to thank you for your generous contributions and support throughout 2019.

In addition, we hope that you will be able to take part in one or more of our many exciting events planned for 2019; such as our Brainy Boomer Lecture Series and Open House – Health Day (September 13, 2019). We look forward to your feedback and suggestions, email us at info.mcsa@mcgill.ca.