McGill | Faculty of Medicine and Health Sciences | Faculté de médecine et des sciences de la santé

## Committee for Oversight of Research Units

## Annual Reporting for Faculty Supported Research Centres and Networks

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All Centres (provisional Centres; McGill Centres), Research groups and Networks that receive funding from the Faculty of Medicine and Health Sciences (FMHS) are required to provide an annual report to the Committee for Oversight of Research Units (CORU)

The reporting period is May 1, 2022 – April 30, 2023.

Please submit your report to the Research Office, Faculty of Medicine and Health Sciences (**riac.med@mcgill.ca**) before the following deadline:

# May 15, 2023

**Continued support from the Faculty is contingent on:**

1. the receipt of the reporting documents on time,
2. the evaluation of reported activities by the Faculty's Committee for Oversight of Research Units (CORU),
3. the availability of Faculty funds.

Your strong engagement in the Faculty's mission for continued research excellence and financial stewardship is truly appreciated.

## Annual Report of Activities and Outcomes

Name of the Unit:

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

Le Centre de recherche et d'études sur le vieillissement de l'Université McGill (CMEV)

Name of Unit leader & email address: Director's Contact Information:

Dr. Pedro Rosa-Neto, MD, PhD, Professor of Neurology & Neurosurgery, Psychiatry and Pharmacology & Therapeutics at McGill University, affiliated to the Douglas Hospital Research Centre.

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If the Unit is **a Senate-approved** McGill Research Centre, indicate date of approval: MCSA is a recognized as an official Senate approved McGill Research Centre since October 1, 1984.

**Mission statement** of the Unit (~2 sentences):

Refer to the following link that captures the same information as presented in our website (Mission Statement).The Centre leads the way to cure, treat and prevent dementias by promoting research, education, and teaching in the field of aging and aging research.

**Total number of Unit members: 42 Core Members (Core members)**

1 Director
2 Faculty Clinicians (Dr. Vitali & Dr. Geddes)
1 Chair, MCSA Education Committee/Member of the Executive Committee
2 Nurses (one on sick leave)
1 Medical Secretary
1 Clinical Coordinator (Mallery Landry)
1 Receptionist/Administrative Clerk
1 Social Media Administrator
1 Web Designer (Part-Time)
1 Translator (Part-Time)
1 Genetic Counselor (Part-Time)
1 Administrative Assistant
1 Business Development
1 Post-Doctoral Fellow
8 PhD
6 Masters
8 Research
2 Visiting Scholars
2 Graduate Research Trainees

**Number of members affiliated with McGill's FMHS: Total 56 - 34 (Affiliated with McGill) 22 (External)**

**Unit's website:**

**Please note the website needs to feature:**

- all sources of funding support (including the FMHS logo),
- the list of Members and their institutional affiliation with appropriate links,
- the activities supported by the Unit,
- all previous Annual Reports.

Website address (URL): http://mcsa.ca/

**Please respect the page limits, where indicated.**

*(minimum font size of 11 pts, use lay language)*

1. **Explain the significance of the Unit's mission at McGill and beyond** (1/2 page max.) (Mission Statement)

The MCSA's mission holds a great significance at McGill University based on the research excellence theme of neurosciences, under the area of neurodegenerative disorders. Our commitment to the University is to **promote research, education, training and teaching primarily on aging, age related diseases, prevention, and early diagnosis of age-associated cognitive decline.** The MCSA is a vital part of the University's setting which serves as a point of convergence for the aging and dementia community. Our Memory clinic conducts advanced cognitive assessments, specialized neurological exams, novel diagnostic tests (such as bloodwork and lumbar puncture) and cutting-edge diagnostic brain imaging. The Centre has sustained growth of its operations by catalyzing transformative research and implementing dementia preventative strategies, and interventions. For example, our researchers have developed six new methods to detect and track at-risk individuals at early stages of cognitive decline and have advanced early Dementia Biomarkers: P-Tau: 181, 231, 217, NFL, NTBA, MK6240 . Regarding dementia trials, the MCSA is conducting the first anti-amyloid and anti-tau combined therapy. These research innovations certainly position McGill on the forefront of dementia research at National and International level. MCSA also excels internationally on virtual learning, knowledge transfer events and public education designed to sensitize both scientists and lay public with the "International Dementia Conferences", "Brainy Boomers Lectures Series", "Publish and Cherish", "World Alzheimer Report 2022", and lastly the new webinars "Ensemble, Nous Prenons Soins".

**2. Alignment with the Faculty's Strategic Research Plan** (1/2 page max.) (5 year SRP)

The following 2022 accomplishments that align with the Faculty's Strategic Research Plan (Brain Research and Research in Dementia) are listed below:

(1). **Transformative global outreach in dementia**

- World Alzheimer's Report 2022 Title "Journey through the diagnosis of dementia, Life after diagnosis: navigating treatment, care and support explores the many facets of life for people with dementia, their carers, and healthcare professionals following a diagnosis of dementia.

(2**). Innovative online outreach programs**

- MCSA YouTube Channel, MCSA Facebook Page, MCSA Twitter, MCSA LinkedIn page, MCSA Zoom platform, interactive physical exercises programs, support for social isolation.

(3). **Telemedicine in Dementia Care and Cognition**

- Advancing online cognitive assessments through online tool for assessing decline in cognition called SNAP (Screening of Neurobehavioral Abnormalities in the Ageing Population) a platform able to incorporate novel test and multiple languages.
- Validating online dementia screening in participants of the TRIAD cohort – Cognitive Test for Dementia (CoDe) online application to assess cognition under investigation for dementia.

(4). **Excellence in early Dementia Biomarker Research**

- MCSA is conducting transformative research to develop affordable biomarkers- BIOPAD (BIOMARKER DISCOVERY PLATFORM FOR AGING AND DEMENTIA) by developing precision diagnostic test for dementia using plasma samples and tests for non-Alzheimer's Dementia's.

(5). **Enriched collaboration networks and open science initiatives**

- Expansion of International Academic and Industry Collaborations, enhancement of medical and research training capacity via novel partnerships and implementation of a roadmap to foster open science. In collaboration with the Brightfocus Foundation, we opened a data exchange program among Dementia scientists**.**

(6). **Serving Society through education and knowledge transfer programs**

- The MCSA provides an innovative learning environment for its students and professionals.
- The MCSA supports initiatives that promote personal and community improvement, through our many free community knowledge transfer programs such as: Brainy Boomer Public Lecture Series (BB) (Exercise/Nutrition/Prevention); Groupe de Soutiens; International Dementia Conference Series (IDCS); Publish and Cherish; World Alzheimer Report 2022.

3. **Highlight the top-5 accomplishments of the Unit over the past 12 months** (1/2 page max., use bullets).

**1. Excellence in Publications**

- The MCSA members published **505 papers** about aging and Dementia**.** We would like to highlight the use of brain imaging to stage Alzheimer's Disease, something that was previously only possible after someone with dementia passed away. Furthermore, our staging system allows for the identification of individuals with preclinical impressive strides in blood-based biomarkers for Alzheimer's Disease.

**2. High Profile International collaborations**

- Collaboration with Dr. Kaj Blennow and Dr. Henrik Zetterberg in Sweden have brought countless advances in blood biomarkers for Alzheimer's Disease, through collaborations with groups in Sweden, the Netherlands, Germany, Singapore, Japan and the United States, outstanding scientific breakthroughs have been possible through open science.
- MCSA's TRIAD cohort has become an indispensable resource for international groups to confirm and strenghten new scientific findings.

**3. World Alzheimer's Report 2022- "Life After Diagnosis: Navigating Treatment, Care and Support".** (W.A.R. Report)

- September 21, 2022 – 2nd year - the World Alzheimer's report was prepared under the leadership of Drs. Pedro Rosa-Neto and Serge Gauthier along with McGill Colleagues Dr. José Morais, Claire Webster, Dr. Tamara Ellen Carver, Zeina Salameh, Carol Servaes, Maria Vincelli, Diane Weidner and Leila Zahabi.

**4. Research from the McGill University Research Centre for Studies in Aging has made breakthroughs in characterizing previously under-recognized forms of Alzheimer's Disease**.

- These rare "atypical" forms of Alzheimer's Disease are very difficult for doctors to diagnose because they resemble symptoms of other neurological disorders not usually associated with Alzheimer's Disease until late stages: behaviour and personality changes or language dysfunction. Research from our group, published in the leading journal Science Translational Medicine, has characterized the abnormal Alzheimer's Disease proteins in these rare conditions. journal: https://www.science.org/journal/stm article: https://www.science.org/doi/10.1126/scitranslmed.abc8693

**5. Outreach Projects: BB Lectures/Nutrition, Exercise for Seniors, IDCS, Support Groups, Publish and Cherish; MCSA Newsletters**

- BB Lectures Year 2022-2023– 28 lectures; 24 Exercise for Seniors; Total Participants 972
- BB Lectures – (2007-2022) 15th years Anniversary 2007-2022 – Lectures 408 & Participants 17,560
- Ensemble Nous Prenons Soins – 7 Webinars; Total Participants 110
- Young Caregiver Groups/Groupes des jeunes proches aidants – 20 Groups; Total Participants 123
- IDCS Conferences – 21 lectures – 1,680 Participants.
- Publish and Cherish – 3 lectures – 180 Participants.
- 2022-2023 BrightFocus Foundation 20,000$ USD per year to IDCS & Publish & Cherish conference series.
- MCSA Newsletters – 3 (April/August/November 2022) – Donor/Patient mailout 3000 participants

4. **Major joint publications over the past 12 months** (including shared software, data repositories; with links). Please only feature the article co-authored by at least two PI members of the Unit: **(Total 505)**

**42 – Co-authorized by at least two PI members of the Unit**
**463 – Published by MCSA Members**

Characteristics of subjective cognitive decline associated with amyloid positivity. Janssen O, Jansen WJ, Vos SJB, Boada M, Parnetti L, Gabryelewicz T, Fladby T, Molinuevo JL, Villeneuve S, Hort J, Epelbaum S, Lleó A, Engelborghs S, van der Flier WM, Landau S, Popp J, Wallin A, Scheltens P, Rikkert MO, Snyder PJ, Rowe C, Chételat G, Ruíz A, Marquié M, Chipi E, Wolfsgruber S, Heneka M, Boecker H, Peters O, Jarholm J, Rami L, Tort-Merino A, Binette AP, Poirier J, Rosa-Neto P, Cerman J, Dubois B, Teichmann M, Alcolea D, Fortea J, Sánchez-Saudinós MB, Ebenau J, Pocnet C, Eckerström M, Thompson L, Villemagne V, Buckley R, Burnham S, Delarue M, Freund-Levi Y, Wallin ÅK, Ramakers I, Tsolaki M, Soininen H, Hampel H, Spiru L; Alzheimer's Disease Neuroimaging Initiative; FACEHBI study group; PREVENT-AD research group; Tijms B, Ossenkoppele R, Verhey FRJ, Jessen F, Visser PJ. Alzheimers Dement. 2022 Oct;18(10):1832-1845. doi: 10.1002/alz.12512. Epub 2021 Dec 8. PMID: 34877782. IF 21.56

Spatial Extent of Amyloid-β Levels and Associations With Tau-PET and Cognition. Ozlen H, Pichet Binette A, Köbe T, Meyer PF, Gonneaud J, St-Onge F, Provost K, Soucy JP, Rosa-Neto P, Breitner J, Poirier J, Villeneuve S; Alzheimer's Disease Neuroimaging Initiative, the Harvard Aging Brain Study, the Presymptomatic Evaluation of Experimental or Novel Treatments for Alzheimer Disease Research Group.
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Comment on "Microglial activation states drive glucose uptake and FDG-PET alterations in neurodegenerative diseases". Zimmer ER, Pascoal TA, Rosa-Neto P, Nordberg A, Pellerin L. Sci Transl Med. 2022 Aug 24;14(659):eabm8302. doi: 10.1126/scitranslmed.abm8302. Epub 2022 Aug 24. PMID: 36001681 IF. 17.9

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In vivo tau staging in Alzheimer's disease. Therriault J, Gauthier S, Rosa-Neto P. Aging (Albany NY). 2022 Sep 14;14(17):6842-6843. doi: 10.18632/aging.204293. Epub 2022 Sep 14. PMID: 36103250 IF 5.9

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Author Correction: [11C]Martinostat PET analysis reveals reduced HDAC I availability in Alzheimer's disease. Pascoal TA, Chamoun M, Lax E, Wey HY, Shin M, Ng KP, Kang MS, Mathotaarachchi S, Benedet AL, Therriault J, Lussier FZ, Schroeder FA, DuBois JM, Hightower BG, Gilbert TM, Zürcher NR, Wang C, Hopewell R, Chakravarty M, Savard M, Thomas E, Mohaddes S, Farzin S, Salaciak A, Tullo S, Cuello AC, Soucy JP, Massarweh G, Hwang H, Kobayashi E, Hyman BT, Dickerson BC, Guiot MC, Szyf M, Gauthier S, Hooker JM, Rosa-Neto P. Nat Commun. 2022 Oct 3;13(1):5833. doi: 10.1038/s41467-022-33668-0. PMID: 36192402 IF 17.6

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Association of Phosphorylated Tau Biomarkers With Amyloid Positron Emission Tomography vs Tau Positron Emission Tomography. Therriault J, Vermeiren M, Servaes S, Tissot C, Ashton NJ, Benedet AL, Karikari TK, Lantero-Rodriguez J, Brum WS, Lussier FZ, Bezgin G, Stevenson J, Rahmouni N, Kunach P, Wang YT, Fernandez-Arias J, Socualaya KQ, Macedo AC, Ferrari-Souza JP, Ferreira PCL, Bellaver B, Leffa DT, Zimmer ER, Vitali P, Soucy JP, Triana-Baltzer G, Kolb HC, Pascoal TA, Saha-Chaudhuri P, Gauthier S, Zetterberg H, Blennow K, Rosa-Neto P. JAMA Neurol. 2022 Dec 12. doi: 10.1001/jamaneurol.2022.4485. Online ahead of print. PMID: 36508198 IF 29.29

The association of age-related and off-target retention with longitudinal quantification of [18F]MK6240 tau-PET in target regions. Tissot C, Servaes S, Lussier FZ, Ferrari-Souza JP, Therriault J, Ferreira PCL, Bezgin G, Bellaver B, Teixeira Leffa D, Mathotaarachchi SS, Chamoun M, Stevenson J, Rahmouni N, Kang MS, Pallen V, Poltronetti NM, Wang YT, Fernandez-Arias J, Benedet AL, Zimmer ER, Soucy JP, Tudorascu DL, Cohen AD, Sharp M, Gauthier S, Massarweh G, Lopresti BJ, Klunk WE, Baker SL, Villemagne VL, Rosa-Neto P, Pascoal TA. J Nucl Med. 2022 Nov 17:jnumed.122.264434. doi: 10.2967/jnumed.122.264434. Online ahead of print. PMID: 36396455 IF 10.0

Discordance and Concordance Between Cerebrospinal and [18F]FDG-PET Biomarkers in Assessing Atypical and Early-Onset AD Dementia Cases. Quispialaya KM, Therriault J, Aliaga A, Zimmermann M, Fernandez-Arias J, Lussier F, Massarweh G, Pascoal T, Soucy JP, Gauthier S, Jean-Claude B, Gilfix B, Vitali P, Rosa-Neto P. Neurology. 2022 Nov 29;99(22):e2428-e2436. doi: 10.1212/WNL.0000000000201198. Epub 2022 Oct 20. PMID: 36266044 IF 9.9

Medial temporal tau predicts memory decline in cognitively unimpaired elderly. Kwan ATH, Arfaie S, Therriault J, Azizi Z, Lussier FZ, Tissot C, Chamoun M, Bezgin G, Servaes S, Stevenon J, Rahmouni N, Pallen V, Gauthier S, Rosa-Neto P. Brain Commun. 2022 Dec 9;5(1):fcac325. doi: 10.1093/braincomms/fcac325. eCollection 2023. PMID: 36627889

5. **Major joint research projects funded over the past 12 months** (involving at least two PI members of the Unit: (**15 major joint research projects**)

2021-2026 Longitudinal multicenter head-to-head harmonization of tau PET tracers". NIH 1R01AG073267-01, GRANT13216360 Pascoal, Tharick (PI), Baker, Suzanne (PD/PI); Bateman, Randall; Blennow, Kaj; Cohen, Ann; Foroud, Tatiana; Gauthier, Serge; Gordon, Brian; Graff-Radford, Jonathan; Jagust, William; Janabi, Mustafa; Klunk, William; Koeppe, Robert ; La Joie, Renaud; Lopez, Oscar; Lopresti, Brian; Lowe, Val; Masdeu, Joseph ; Min, Paul; Oh, Hwanee; Pascual, Belen; Petersen, Ronald; Rabinovici, Gil; Raji, Cyrus; Rosa-Neto, Pedro (Co-I); Toga, Arthur; Tudorascu, Dana; Villemagne, Victor; Zetterberg, Henrik; (Pending IRG)

2020-2025 Integrating Multi-Omics, Multi-Modal Neuroimaging and Artificial Intelligence for Biologically- defined Staging and Stratification in the Alzheimer's Disease spectrum. CIHR- Project Grant 2020 (CAN$745,876) Dr. Yasser Iturria Medina (PI) S. Ducharme, S. Duchesne, S. Gauthier, C. Kleinman, K. O'Donnell, Rosa-Neto, Pedro (Co-Applicant)

2020-2025 Investigating the impact of loneliness on brain aging and pre-symptomatic Alzheimer's disease progression. NIH National Institute of Aging (US$2,046,995) Danilo Bzdok (PI) Robert Nathan Spreng (CO-PI) Rosa-Neto, Pedro

2020-2023 The McConnell Brain Imaging Center: A world-renowned multidisciplinary platform dedicated to brain research using multimodal neuroimaging and neuroinformatics. Brain Canada Foundation. ($4,797,000) Julien Doyon (PI) Rosa-Neto, Pedro

2020-2025 Blood-based biomarkers for ageing-related brain diseases. CFI Grant.($1,100,000) John R. Evans Leaders Fund – Funding for research infrastructure / Fonds des leaders John-R.-Evans – Financement de l'infrastructure de recherche: Project Leader: Rosa-Neto, Pedro

2019-2024 Untangling tau contribution to cognitive impairments in Huntington's disease CIHR-Project Grant 2019 ($1,044,225). Cicchetti, Francesca (PI); Rosa-Neto, Pedro (Co-applicant); Planel, Emmanuel

2019-2023 Development of dynamic 1H MRSI for the assessment of impaired brain glucose metabolism in patients with early Alzheimer's Disease. CIHR-Project Grant 2019 (CAN$772,651) Near, Jamie (PI), Rosa-Neto, Pedro (Co-applicant)

2019-2023 Biomarqueurs de vieillissement et de démence: BioVie. FRQS (CAN $ 1,442,842). Rosa-Neto, Pedro (PI); Gauthier, Serge; Soucy, Jean-Paul; Tsuneyuki, Ozaki

2019-2024 Phase two of the Canadian Consortium on neurodegeneration in aging. CCNA/CIHR (CAN$31,625,000) Bartha R, Rogaeva E, Gan-Or Z, Cuello C, Rosa-Neto, Pedro

2019-2022 In vivo quantification of tau aggregates as a measure of disease progression in Alzheimer's disease spectrum. Weston Brain Institute – Transformational Research (CAN $1,527,750). Rosa-Neto, Pedro (PI); Gauthier, Serge; Massarweh, Gassan; Soucy, Jean-Paul; Ducharme, Simon; Vitali, Paolo

2017-2022 Tracking the Progression of Neuroinflammation and Tau aggregates in Mild Cognitive Impairment using PET scanning. Canadian Consortium on Neurodegeneration in Aging (CCNA) (CAN $120,000). Rosa-Neto, Pedro (PI); Masellis, Mario; Villeneuve, Sylvia; Tartaglia, Carmela

2017-2022 Interactions between pathological processes as drivers of clinical progression in Alzheimer's disease. CIHR Project Grant 2016 (CAN $1,377,000). Rosa-Neto, Pedro (PI); Gauthier, Serge; Massarweh, Gassan; Chakravarty, Mallar; Pruessner, Jens; Soucy, Jean-Paul.

2017-2022 The impact of sex, menopausal status and +APOE4 risk for Alzheimer's Disease on the neural correlates of episodic memory in healthy middle-aged adults. CIHR Project Grant 2016 (CAN $ 833,850). Rajah, M. Natasha, Chakravarty, Megha M; Einstein, Gillian; Gauthier, Serge G; Poirier, Judes; Pruessner, Jens C; Rosa-Neto, Pedro (Co-applicant).

2017-2022 Cocaine Addiction: Epigenetic Studies in Living and Postmortem Brain. CIHR Project Grant 2016 (CAN $ 1,235,475). Leyton, Marco, Benkelfat, Chawki; Booij, Linda; Clarke, Paul B; Gobbi, Gabriella; Peterson, Alan C; Rosa-Neto, Pedro (Co-applicant); Turecki, Gustavo X.

2017-2022 Role of HMG CoA reductase protective and risk variants in the pathophysiology and treatment of sporadic Alzheimer's disease (CAN$948,600). CIHR - Project Grant. Poirier, Judes, Breitner, John C; Rosa-Neto, Pedro (Co-applicant).

**6. Major outreach activities** (e.g., seminar series, general public events):

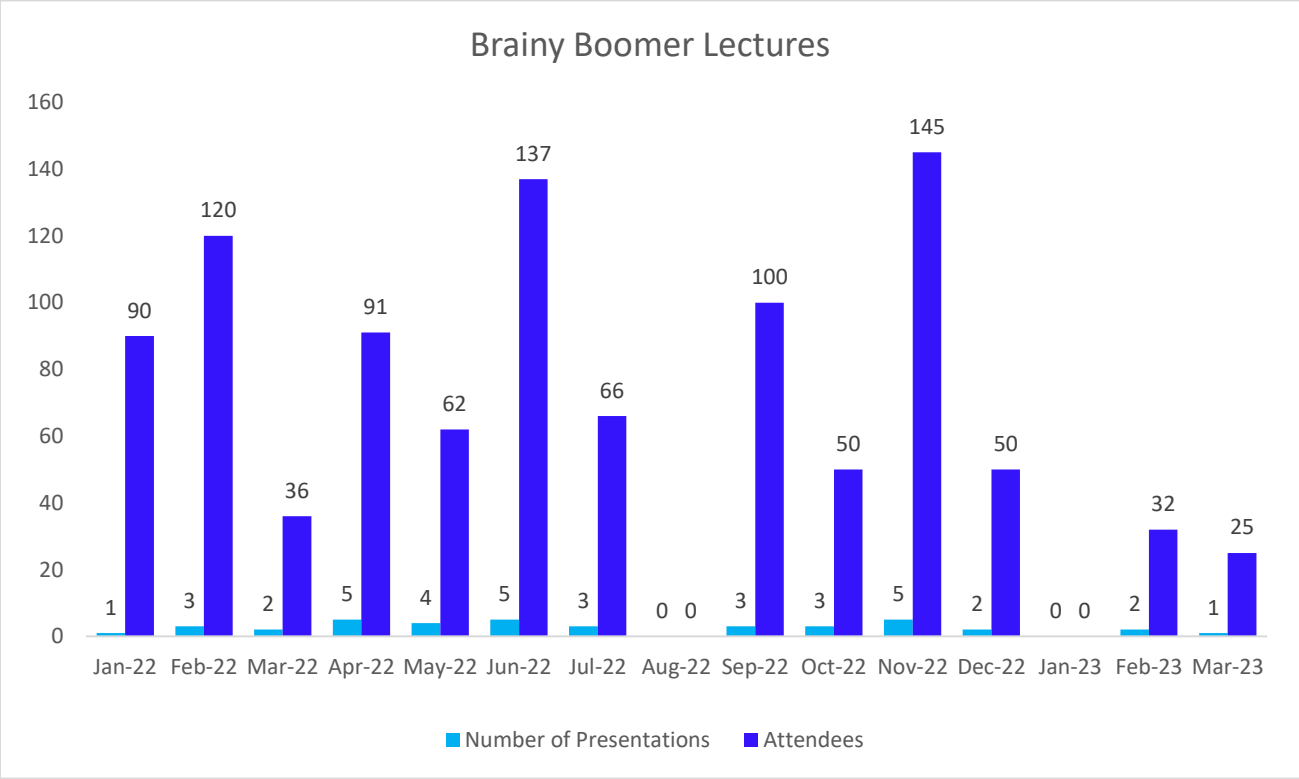
**World Alzheimer Report 2022** "Life **after diagnosis: Navigating treatment, care and support**" (W.A.R. Report)

On September 21, 2022, the World Alzheimer Report 2022, Life after diagnosis: Navigating treatment, care and support, was launched. This report was commissioned by Alzheimer's Disease International (ADI) and was prepared under the leadership of Drs. Pedro Rosa-Neto and Serge Gauthier, along with McGill colleagues Dr. José A. Morais, Claire Webster, Dr. Tamara Ellen Carver, Zeina Salameh, Carol Servaes, Maria Vincelli, Diane Weidner, and Leila Zahabi. The report was dedicated to the vast topic of post-diagnosis support which focused on the variety of official, informal services and information aimed at promoting the health, social and psychological wellbeing of people with dementia and their carers after a diagnosis. Their report included 119 essays across 24 chapters, which were underpinned by a survey that weaves in the voices of real people living with dementia, their carers, and care professionals. This report follows the **2021 World Alzheimer's Report:** ***Journey through the diagnosis of dementia,*** which was prepared by the same team and released in September 2021.

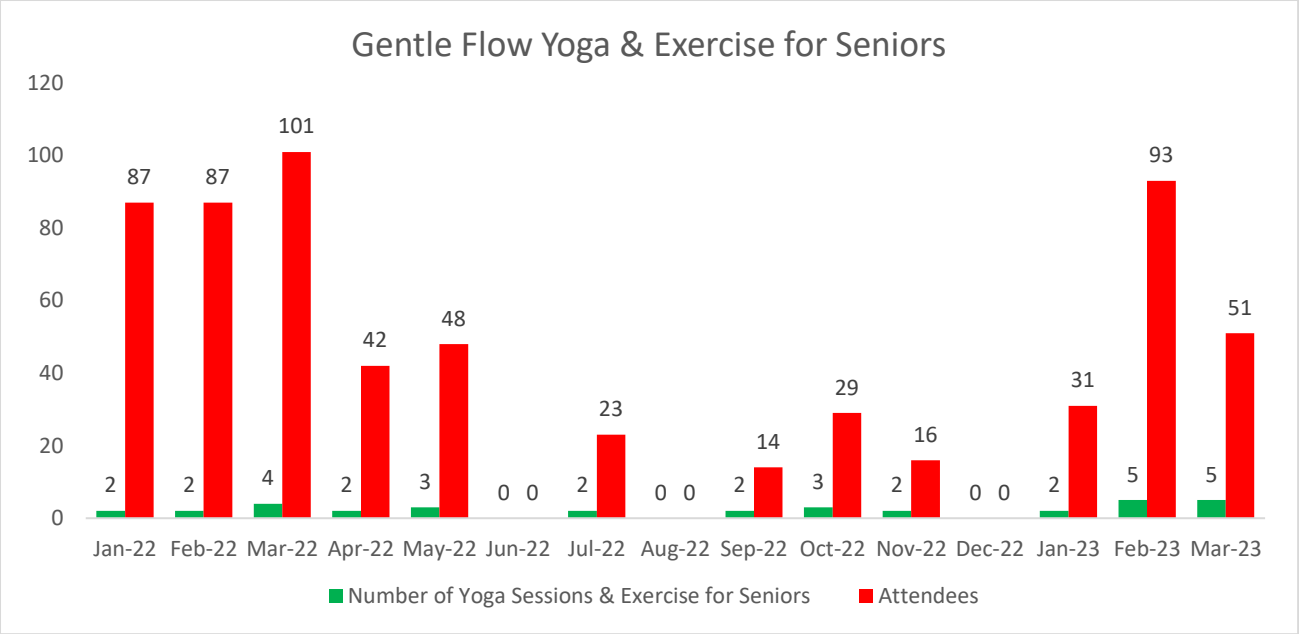
**Celebrating World Alzheimer's Day** – September 21, 2022- discussion with authors, Drs. Serge Gauthier, Pedro Rosa-Neto, Isabelle Gélinas, Maiya Geddes, Tamara Carver, Lisa Koski, Catherine Ferrier and Saskia Sivananthan with Claire Webster, Laura Robb of the World Alzheimer's Report, Community Groups, and Donors (Link)

**Brainy Boomer Lecture Series (BB)/Les Boomers Brillants:** The Education Committee of the McGill University Research Centre for Studies in Aging (MCSA) was established in 1996. In 2007 the Education Committee established the "Brainy Boomer Lecture Series" to support its objectives, raise awareness and educate the community at large. Our public lecture series are presented by academic professionals and medical specialists. The goal of the series is to suggest and initiate practical steps to improve brain health, to prevent other age-related disorders, as well as to promote healthy lifestyle choices amongst the most populous generation in history. In 2022 (May 2022– April 2023), the virtual Brainy Boomers series, consisted of nearly **52 lectures** with a total of **972 participants**, covering various topics related to healthy aging, including COVID-19 prevention, dementia prevention, mitigating impact of social isolation, yoga, exercise for seniors with presentation and Q&A sessions. Our participants are typically older adults (55 and over), consisting of caregivers, patients, and donors. This year the Brainy Boomer Lecture Series celebrated its 15th year anniversary (2007-2022) having hosted a total of 408 lectures with a cumulative total of 17,500 participants.

(List of BB Events)



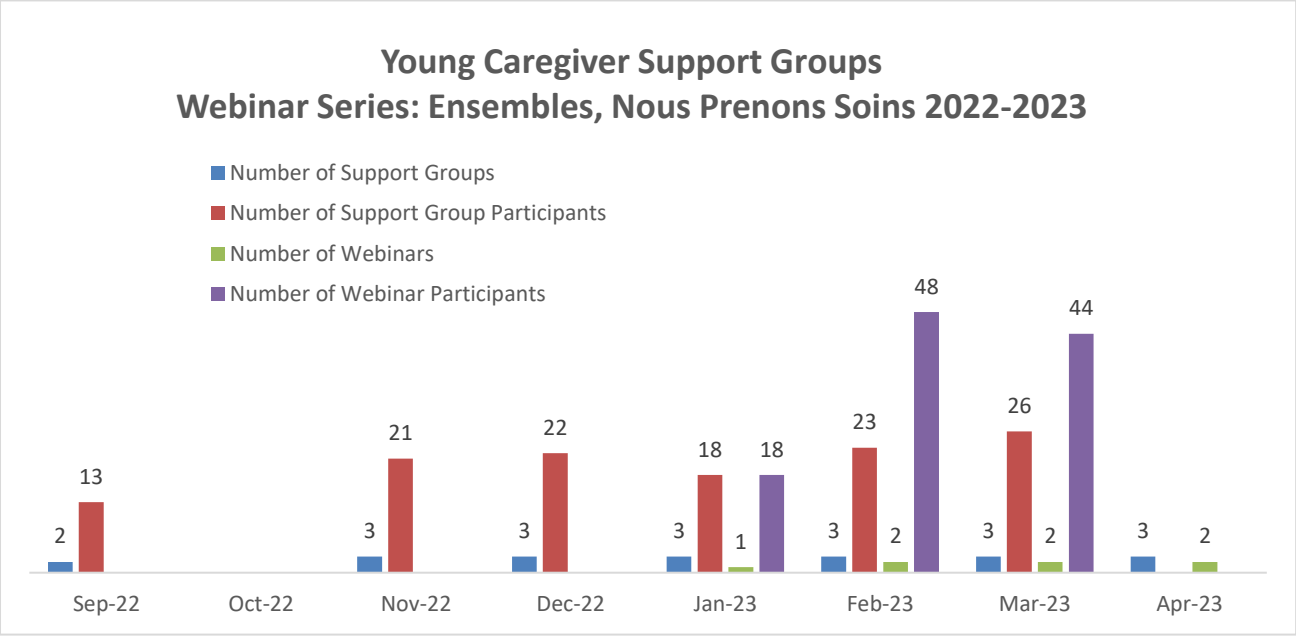

TOTAL PRESENTATIONS: **39** TOTAL ATTENDEES: **1004**




TOTAL SESSIONS: **34** TOTAL ATTENDEES: **622**

**<u>Young Caregiver Support Groups/Groupes des jeunes proches aidants:</u> <u>New September 2022**

The McGill University Research Centre for Studies in Aging is pleased to announce three support groups which were created by Dr. Dolly Dastoor and Mallery Landry for the children of patients with major neurocognitive disorders before the age of 65, such as early-onset Alzheimer's Disease. This is the first initiative of its kind in Quebec. The three-support group are for Teenagers, Young adults, and Spouse/Partner groups. This initiative was received with great enthusiasm by community organizations in the field and by their families. We have started to welcome young people from other institutions in our groups. So far, more than a hundred invitations have been sent out and more than twenty institutions and professionals have been informed of this service to ensure accessibility to all. **New <u>Webinar Series</u> entitled: "<u>Ensembles, Nous Prenons Soins</u>"** began January 2023. **(Link)**




Total Support Groups: **20** Total Support Group Participants: **123**
Total Webinars: **7** Total Webinar Participants: **110**

**The *International Dementia Conference Series*** *(IDCS)* has rapidly evolved into a mentorship program focused on nurturing the next generation of dementia scientists. Our core values are excellence, diversity, and innovation. The program is an ever-evolving project where everyone, from undergraduate to Emeritus, is invited to participate and contribute. Experienced investigators are invited to elaborate on the most pressing problems in neurodegeneration and devise solutions thereby encouraging collaboration among student groups. The generosity of the scientists in our community enables one-on-one mentorship and nurtures the next generation of dementia scientists. This platform facilitates the interactions between trainees and high caliber scientists in the form of a lecture series. This series aims to embody the translational nature of research by bringing together specialists in-vitro studies focused on understanding individual biological constituents of disease, in vivo studies whereby these individual constituents are studied in the context of model organisms of disease, and in clinical studies where we find emergence of these constituents in humans affected by disease. This level of communication across the hierarchy of research environments will be a crucial component towards finding lasting solutions. The sustainability of this project comes from the synergy between: Inspiration from the late career and enthusiasm from early career scientists. **21 lectures from May 2022- April 2023 and 1,680 participants.** https://www.i-dcs.org,

**Publish and Cherish – New incentive started November 2022**

The purpose of this series is to invite the first authors of impactful papers to present their work and talk about the journey leading to the publication. During these sessions, the junior faculty give presentations about their work, tell the story of the inception of their projects, and learn how the project was conceptualized and how it evolved. **3 lectures from November 2022 – April 2023 and 180 participants.**

**SNAP**

The SNAP (Screening of Neurobehavioral Abnormalities in the aging Population) project is a fresh twist to the old PONDER project. SNAP is aimed at using cognitive performance as a tool to screen for dementia at early stages. The project features a website that provides free online cognitive assessments and encompasses a comprehensive approach towards the study of variables associated with neurodegeneration in the older population. The validation of SNAP within the TRIAD cohort would allow for the implementation of SNAP in a clinical setting and provide patients and clinicians with an easy and remote access to cognitive and neuropsychological assessments therefore alleviating the burden and stress associated with in person testing. Due to its flexibility, we anticipate that SNAP will enhance collaborations within the entire McGill and the international community of cognitive researchers. https://snap-test.ca

**BUSINESS DEVELOPMENT OUTREACH 2022-2023**

| | |
|---|---|
| Colin Adair Family Foundation-Fellowship 2022-2026 ($100,000 /per year) | $500,000.00 |
| Travel Award (Students) | $8,000.00 |
| McGill 24 Campaign (2022) | Donations Received $7,000.00 |
| Triannual Mailout Communication (Donors and Patients) | 3000 mailout letters |
| Triannual MCSA Newsletters 2022 | April 2022, August 2022 & November 2022 – Keeping our participants, patients, donors up to date with the Centre's Clinical, Research and Outreach activities |
| MCSA Welcome Donor Information Packages handouts to all patients/caregivers/research participants | 2022 to attract new Donors and provide an overview of the Centre's services and research |
| Total Donations (May 2022 to March 2023) | $63,270.19 |

**Knowledge Transfer Activities 2022:** Social Networking Platforms, MCSA adapted various platforms since the pandemic: Zoom, Teams, YouTube, Twitter, LinkedIn, Facebook.

7. **Major training activities** (e.g., summer schools, co-supervision of trainees, practical workshops):

**Major Training Activities Summary:**

| | Post-Doctoral | PhD | MSc | Medical Student | Undergraduate Student | Undergraduate Co-op Student | Graduate Research Trainee | Visiting Scholar | Interns | Fellows | Cegep Students | Early Career Faculty |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dr. Pedro Rosa-Neto (16) | 1 | 6 | 5 | 1 | - | - | - | 3 | - | - | - | - |
| Dr. Paolo Vitali (5) | - | - | - | - | - | - | - | - | 3 | 2 | - | - |
| Dr. Maiya Geddes (24) | 1 | 3 | 3 | 2 | 11 | 2 | - | - | - | - | 1 | 1 |

8. If applicable, **list new members** who joined the Unit in the past 12 months (indicate: Name, title, full/associate member, affiliation):

**Dr. Nicholas Aston**, PhD, Adjunct Professor, University of Gothenburg, Sweden

**Dr. Randall Bateman**, MD, Adjunct Professor, Washington University School of Medicine

**Dr. Vincent C. Gaudet**, PhD., P. Eng., Adjunct Professor, University of Waterloo

**Dr. Thomas K. Karikari**, PhD, Adjunct Professor, University of Gothenburg, Sweden & University of Pittsburgh, U.S.A.

**Dr. Yasser Iturria Medina**, PhD, Associate Member, **McGill University**

**Dr. José Morais**, MD, FRCPC, Associate Member, **McGill University**

**Dr. Gerhard Multhaup**, PhD, Associate Member, **McGill University**

**Dr. Tharick Pascoal**, MD, PhD, Adjunct Professor, University of Pittsburgh

**Dr. Marco Prado**, PhD, Adjunct Professor, Robarts Research Institute, The Schulich School of Medicine & Dentistry, University of Western Ontario

**Dr. Simon Wing**, MD, FRCPC, Associate Member, **McGill University**

**Dr. Katherine Zukotynski**, BASc,MD, PhD, Peng, FRCPC, FACNM, FSNMMI, Adjunct Professor, University McMaster

9. If applicable, **list members who have left the Unit** in the past 12 months. (Indicate: Name, title, full/associate member, affiliation):

Dr. Alain Dagher, MD, PhD, Affiliate Member

Dr. Howard C. Feldman, MD, Affiliate Member

Dr. Jean-Pierre Michel, MD, Affiliate Member

Dr. Nathalie Phillips, PhD, Adjunct Member

**Financial report & forecast**

| Expenses | 2022/23 report | 2023/24 budget |
|---|---|---|
| Total salaries | $210,000.00 | $250,000.00 |
| Travel Conferences Students | $36,000.00 | $40,000.00 |
| Stipends | $4,990.90 | $5000.00 |
| Outreach | $10,000.00 | $10,000.00 |
| Publications | $8,096.82 | $20,000.00 |
| Other (Detail in #10 below) | $12,189.29 | $15,300.00 |
| **Total expenses** | $281,277.01 | $340,300.00 |

| Revenues | 2022/23 report | 2023/24 budget |
|---|---|---|
| Carryover | - | - |
| FMHS | $15,000.00 | $50,000.00 (forecasted 2023-2024) |
| User fees | - | - |
| Other sources (Detail in #10 below) | $332,231.21 | $323,801.43 |
| **Total revenues** | $347,231.21 | $373,801.43 |

10. Budget justification and details (e.g., itemize if multiple salaries, detail other sources of funding):

| Expenses: Other Sources Details #10 | 2022/23 report | 2023/2024 budget |
|---|---|---|
| Other Sources Details: Specialized equipment purchases, upgrade, repair; Computer equipment; Materials & supplies; Brokerage; Contract Services; Printing; Citizen & Imm. Eapps Fees International Visitors, Network Con. Internal Purchases. | $12,189.29 | $15,300.00 |

| Revenues: Other Sources Details #10 | 2022-2023 report | 2023-2024 budget |
|---|---|---|
| R. Wiselburg Fund; Jennie Rae-Feldman Bequest; W.& C. Bentham Medical Research Fund; Derek Davis Comined Annuity Fund; Chalk Rowles Laura Lectureship; MCSA Donations; MCSA Alzheimer Disease Unit; Colin Adair Family Foundation; Gloria Gari Support Travel Fund; | $347,231.21 | $373,801.43 |

In order to sustain our outreach programs/social media for 2023-2024 we are requesting financial assistance in the amount of $50.000.00 from the FMHS. This additional revenue will increase content quality, production value, and will help us create engaging and effective media that will entice additional traffic to our sites and convert new visitors into potential donors and can aid in the sustainability of the Centre. These funds will used to support our outreach programs/social media by purchasing new equipment (view table #1), advertisements, pay stipends to exercise trainers and would attract a wider community, increase our visibility, revenues and share MCSA's research achievements worldwide.

Table #1

| Device/Program | Cost (prices 2023) | Link |
|---|---|---|
| Laptop (MacBook Pro 16inch 1T storage) | $3,399.00 | Laptop |
| Photography Camera (Nikon Z 6II) | $2,699.00 | Photography Camera |
| Video Camera (Canon XF605 UHD 4K HDR Pro Camcorder) | $6,299.99 | Video Camera |
| Mixing Console (Zoom PodTrak P8 Podcast Recorder) | $492.91 | Mixing Console |
| Audio Processor (Focusrite Scarlett 2i2 Studio - 3rd gen.) | $369.00 | Audio Processor |
| Lavalier Microphone (Rode RodeLink Filmmaker Kit) | $400.00 | Lavalier Microphone |
| External Microphone for Video camera (Rode VideoMic Pro+) | $409.99 | External Microphone |
| 3-4 Condenser Microphones (Shure MV7 USB Podcast Microphone) | $249.00 (each) | Condenser Microphone |
| Monitor (Mac Pro Display XDR) | $6,998.00 | Monitor |
| Mac Studio Power Station | $4,231.00 | Mac Studio Power Station |
| Video Editing Software (Adobe Premiere Pro) | $311.88/year | Video Editing Software |
| Google Storage (2T) | $139.99/year | Google Storage |
| Advertisements (Ex: Bel Âge; Zoomer; Seniors Times etc…) | $6,000.00/year | 2023-2024 (Outreach Programs) |
| Partial Salary | $10,000.00/year | |
| Honorarium for 2 fitness instructors | $4000. per instructor Total $8000. /Year | Yoga and Exercise for Seniors – yearly total 80 exercise classes per year (2 classes per week) |
| Total | $50.000.00 | |

11. Explain why continued support from the FMHS is crucial to Unit (½ page max):

Continued support to our Centre is crucial for initiating new projects and improving our present programs focusing on the health and well-being of older adults. Financial support from the FMHS, would allow innovation, and redesigning of our present initiatives as well as allowing the sustainability of key centre activates (Research, Outreach programs, patient care etc…). During the past years, the Committee for Oversight of Research Units feedback has been very positive and MCSA has received exceptional praise and recognition for the successful pursuit of the diverse array of missions and activities organized and accomplished by the Centre. However, the research, clinical and knowledge transfer activities could be further improved, upgraded, and transformed with continued support from the FMHS. For this reason, we would like to first express our deep gratitude to the FMHS for ongoing support and are asking for additional funding this year to invest in our outreach programs/social media, so that we can continue to deliver the information and knowledge to a growing vulnerable aging population. The additional funds from the FMHS will be invested in our outreach programs by refining our equipment/presentations (camera, software…etc) and thereby enhancing the marketability of the Centre's outreach activities. Having the support of the Faculty can lend credibility to Centre and its programs. This can help the Centre attract new donors, supporters and increase the Centre's impact in the community.

12. Provide suggestions about how the Faculty could do better to support the Unit and research efforts in general (**no page limit but please be specific and unleash your creativity!**)

**Enhance the MCSA-FMHS large donation program:**
The successful fundraising outcomes during 2023 support the concept that FMHS and the MCSA should enhance their fundraising program, particularly focusing on large donations. As the world's population is aging rapidly and the health needs of older adults are unique and complex, large donations have been devoted to aging and dementia prevention and therapy. The National and International outreach of the MCSA research community provides a compelling portfolio to attract high profile philanthropic initiatives.

**Enhance visibility of MCSA:**
We believe that FMHS and MCSA communications office should synergize to enhance the MCSA visibility within and outside McGill, particularly to potential donors. Dissemination of scientific papers, workshops and seminars and research groups are crucial for a better understanding of the centre accomplishments. It would be important to have the MCSA featuring in the McGill Reporter, McGill News and McGill Alumni as well as in external media vehicles across other Canadian institutions. For 2024, the MCSA has enhanced collaborations with McGill Dementia Education Program (DEP), the Department of Geriatrics and the Ludmer centres. We believe that these upcoming initiatives should be well disseminated.

**Support for Research:** One of the current objectives of the MCSA is to find an effective preventative treatment for Alzheimer's Disease, and other age-related diseases and translate these discoveries into benefits to Canadians. In order to promote aging research, the FMHS could organize funding initiatives to enhance the scope of MCSA research to other areas such as metabolism, osteo-muscular, particularly development of novel technologies. Importantly, the Faculty could facilitate collaborations with Industry partners, for the development of novel technologies for diagnosing and monitoring and improve health in the third age. These technologies can make a significant impact in enhancing the health-related quality of life of patients and their caregivers. A business model for the development of these technologies will be crucial for our CFI funded fluid biomarker unit, as it is expected to develop biomarkers with immediate clinical applications.

**Support for Students**: The centre has created the Serge Gauthier and the Colin Adair Family Scholarship, however the number of students supported by these programs should be enhanced. Indeed, both MCSA scholarships focus on enhance diversity among MCSA students. The FMHS could better support present MCSA initiative or create further opportunities for students focusing on new research projects or internships at the Centre. Apart from neurosciences, scholarships will play an important tole on bringing innovation and integrating various unrepresented University Faculties and Departments to the MCSA, such as faculty of Law, Arts, Education, Management and Music.

**Digital Initiatives (Computer designers and programmers):** Computer designers and programmers are expensive human resources necessary for the maintenance of our webpages and web resources. These type of health professionals are key for maintain our data storage, databasing, data analyzing and data sharing activities. In particular, data obtained from ongoing experiments using wearable devices becomes a major challenge due to their high data acquisition capabilities with monitoring simultaneously a wide range of physiological parameters. As such a solution to address these computations is urgently needed, particularly in the context of open science.

There is also a pressing need for developing graphic user interfaces appropriate for seniors. Seniors frequently struggles with visual, auditory, and motor problems. As such, better information technology solutions for the elderly, focusing on simplified tech and addressing health-related hurdles such a poor eyesight, hearing is imperative for our tele-medicine research.