

Curriculum Vitae

Corinne Fischer
Psychiatrist

A. Date Curriculum Vitae is Prepared: 2017 April 7

B. Biographical Information

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1. EDUCATION

Degrees

1989 Sep - 1993 Aug MD, University of Toronto, Toronto, Ontario, Canada

Postgraduate, Research and Specialty Training

1998 Jul - 1999 Jul Fellowship, Geriatric Psychiatry, Department of Psychiatry, McMaster University, Hamilton, Ontario, Canada, Supervisor(s): Dr. Adrian Grek and Dr. Kenneth LeClair
1993 Sep - 1998 Jul FRCPC, Department of Psychiatry, McMaster University, Hamilton, Ontario, Canada

Qualifications, Certifications and Licenses

2013 Jul - present Royal College Subspecialty Certification in Geriatric Psychiatry, Geriatric Psychiatry, Royal College of Physicians and Surgeons of Canada, Toronto, Ontario, Canada, License / Membership #: 510170
1998 Jul - present License, College of Physicians and Surgeons of Ontario, Toronto, Ontario, Canada, License / Membership #: 67362
1998 Jul - present Fellow, Royal College of Physicians and Surgeons of Canada, Ottawa, Ontario, Canada, License / Membership #: 510170

2. EMPLOYMENT

Current Appointments

2015 Jul 1 - present Appointed to the Institute of Medical Science as an associate member, Psychiatry, Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada

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This appointment to IMS as an associate member will allow me to supervise graduate and PhD students as well as residents in the clinician scientist program.

- 2014 Jul 1 - present Associate professor, Geriatric Psychiatry, Psychiatry, Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada
Participated in research, teaching and creative professional activity.
- 2013 Jul 1 - present Co-director of neurodegenerative research, Geriatric Psychiatry, Neuroscience, Faculty of Medicine, St. Michael's Hospital, Toronto, Ontario, Canada
Through this role, my primary responsibility is to foster increased collaboration among a variety of disciplines involved in research in neurodegenerative disorders.
- 2013 Jul - present Co-director of clinical core, Toronto Dementia Research Alliance, Medicine, Behavioural Neurology, University of Toronto, Toronto, Ontario, Canada
In her role as a TDRA member, Dr. Fischer has agreed to co-lead the Clinical Core as TDRA begins to implement a thematic core structure with proven success modeled after Alzheimer's Disease Research Centers in the US. The Clinical Core covers a range of Toronto Dementia Research Alliance disciplines, including Diagnostic and management of various brain neurodegenerative disorders, clinical harmonization, healthy brain aging/non-pharmacologic interventions, epidemiology, neuropsychology, mood & behavior, each with an expert lead in the field.
- 2007 Jul - present Adjunct Scientist, Keenan Research Centre of the Li Ka Shing Knowledge Institute, St. Michael's Hospital, Toronto, Ontario, Canada
Participate in clinical research and knowledge translation activities in my area of expertise (neurobehavioural symptoms in dementia) in collaboration with other scientists
- 2006 Jul - present Director of the Geriatric Mental Health Outreach Team, Mental Health Service, St. Michael's Hospital, Toronto, Ontario, Canada
Supervise a team of clinicians (including myself, a full time nurse clinician and a part-time behavioural neurologist) in assessing and following patients with significant behavioural symptoms residing in selected Long term Care Homes
- 2005 Jul - present Director of Geriatric Psychiatry, Mental Health Service, St. Michael's Hospital, Toronto, Ontario, Canada
Co-ordinate geriatric psychiatry across St. Michael's Hospital, including clinical work, teaching and research
- 2002 Jul - present Director of the Memory Disorders Clinic, St. Michael's Hospital, Toronto, Ontario, Canada
Co-ordinate services at an ambulatory clinic dedicated to diagnosing and monitoring patients with impaired memory and cognition
- 1999 Jul - present Staff Geriatric Psychiatrist, Consultation Liaison Service, Mental Health Service, St. Michael's Hospital, Toronto, Ontario, Canada
Provide psychogeriatric consultation to medical and surgical floors for patients at St. Michael's Hospital. Also supervise residents and medical students rotating through the service

Previous Appointments

CONSULTING

- 2003 Jul - 2005 Jul Psychogeriatric Consultant, Cognitive Disorders Unit, Bridgepoint Health, Toronto, Ontario, Canada
Provided consultation on the management of behavioural symptoms in patients with advanced dementia
- 2000 Jul - 2005 Jul Psychogeriatric Consultant, Providence Centre, Toronto, Ontario, Canada
Provided consultation to elderly patients at Providence Centre presenting with behavioural issues
- 1999 Jul - 2005 Jul Psychogeriatric Consultant to the Regional Geriatric Program, St. Michael's Hospital, Toronto, Ontario, Canada
Provided psychiatric consultation to patients followed by geriatric medicine on the medical and surgical floors of St. Michael's Hospital

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1999 Jul - 2003 Jul Psychogeriatric Consultant, Chester Village, Re kai Centre, Fudger House and Nisbett Lodge, Toronto, Ontario, Canada
Provided informal psychogeriatric consultation to patients in select Long Term Care Homes in the Toronto area

UNIVERSITY

1999 Jul 1 - 2005 Jun 30 Lecturer, Geriatric Psychiatry, Psychiatry, Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada
Participated in teaching, research and creative professional development.

UNIVERSITY - RANK

2005 Jul 1 - 2014 Jun 30 Assistant Professor, Geriatric Psychiatry, Psychiatry, Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada
Participated in teaching, research and creative professional development.

3. HONOURS AND CAREER AWARDS

Distinctions and Research Awards

LOCAL

Received

2013 Oct **Values in Action Award for Social Responsibility**, St. Michael's Hospital, Toronto, Ontario, Canada. (Values in action award, social responsibility, Specialty: Psychiatry)
This award recognizes the Geriatric Mental Health Outreach Team for their contributions to St. Michael's Hospital.

Teaching and Education Awards

LOCAL

Received

2013 May - present **Certificate of Appreciation**, Geriatric Psychiatry, Dept of Psychiatry, Faculty of Medicine, University of Toronto Scarborough Campus, Ontario, Canada. (Undergraduate Education, B. Sc.)
The certificate of appreciation honours Dr. Fischer's contributions to undergraduate research supervision and acknowledges the meaningful learning experiences she has provided to students. Over the course of the past few years Dr. Fischer has consistently employed undergraduate co-op students in the field of neuroscience with opportunities to be involved in clinical research. Many of them have gone on to publish and pursue careers in medicine and graduate school.

2008 - 2009 **Mental Health Service Award for Continuing Medical Education**, Co-chair of the 2008 Toronto Geriatric Mental Health Conference, St. Michael's Hospital, Toronto, Ontario, Canada. (Continuing Education)
This award acknowledges members of the Mental Health Service at St. Michael's Hospital who have made an outstanding contribution to continuing medical education, either through participation in a conference, course or other structured learning event.

2008 - 2009 **St. Michael's Hospital Mental Health Service Award for Excellence in Continuing Medical Education**, Geriatric Psychiatry, Dept of Psychiatry, Faculty of Medicine, St. Michael's Hospital. (Continuing Education)
This award was in recognition of a conference I co-chaired along with Dr. Zahinoor Ismael at the Centre for Addiction and Mental Health entitled The Toronto Geriatric Mental Health

Conference: Behavioural and Psychological Symptoms of Dementia and Late-Life Depression; Translating Knowledge into Clinical Practice. This conference was very well attended and highly rated by attendees.

Nominated

2008 - 2009

Department of Psychiatry Ivan Silver Award for Continuing Medical Education, Geriatric Psychiatry, Dept of Psychiatry, Faculty of Medicine, University of Toronto. (Continuing Education)

This award was in recognition of a conference I co-chaired along with Dr. Zahinoor Ismael at the Centre for Addiction and Mental Health entitled The Toronto Geriatric Mental Health Conference: Behavioural and Psychological Symptoms of Dementia and Late-Life Depression; Translating Knowledge into Clinical Practice. This conference was very well attended and highly rated by attendees.

2008 - 2009

Ivan Silver Teaching Award, Co-chair of the 2008 Toronto Geriatric Mental Health Conference, Dept of Psychiatry, Faculty of Medicine, University of Toronto, Toronto, Ontario, Canada. (Continuing Education)

This award acknowledges a member of the Department of Psychiatry at the University of Toronto for their contribution to continuing medical education, either through participation in a conference, course or other structured learning event.

4. PROFESSIONAL AFFILIATIONS AND ACTIVITIES

Professional Associations

- 2005 Jan - present **Member**, American Association of Geriatric Psychiatry, 106279
- 2005 Jan - present **Member**, Canadian Association of Geriatric Psychiatry
- 2005 Jan - present **Member**, Consortium of Canadian Centres for Clinical Cognitive Research (C5R), 066858
- 2005 Jan - present **Member**, International Psychogeriatric Association, 61541
- 1998 Jul 1 - present **Member**, Canadian Medical Association, 090838
- 1998 Jul - present **Member**, Canadian Medical Protective Association, 986680
- 1998 Jul 1 - present **Member**, Ontario Medical Association, 0633271

Administrative Activities

INTERNATIONAL

AAGP

2015 Jul - present Research committee, Bethesda, Maryland, United States.

ISTAART

2016 Jan - present Neuropsychiatry special interest group, Chicago, Illinois, United States.

NATIONAL

Canadian Association of Geriatric Psychiatry

2012 Oct 31 - present Scientific Advisory Board Meeting, Toronto, Ontario, Canada.

2012 Feb - present **Member**, Scientific Advisory Board Committee
2012 Annual Meeting - my primary role is to provide input into decisions around selection of keynote speakers, symposiums and scientific presentations.

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- 2012 Feb - present **Member**, Communications Committee
My primary role is to assist with the creation of the monthly newsletter, an important tool that assists with communication across the division.
- 2012 Sep 30 - 2014 Sep 30 Board of Directors, Toronto, Ontario, Canada.
- 2012 Sep 30 - 2013 Sep 30 Commincations committee chair, Toronto, Ontario, Canada.

LOCAL

Bridgepoint Hospital

- 2003 Jul - 2005 **Member**, Research Ethics Board
My primary role is to review submitted research protocols to ensure they comply with ethical standards.

St. Michael's Hospital

- 2011 Mar - present **Member**, Elder Care Task Force
My primary role in the task force is to represent Geriatric Psychiatry at the hospital level and provide input around innovative ways to enhance service delivery.
- 2005 Jul - present **Member**, Mental Health Service Medical Advisory Committee
My primary role in the committee is to represent Geriatric Psychiatry at meetings to facilitate service delivery.
- 2004 Jul - 2008 **Member**, Pharmacy and Therapeutics Committee
My primary role is to provide expertise around the appropriate use of psychiatric medications at the hospital.
- 2004 Jul - 2007 **Member**, Delirium and Restraints Working Group
My primary role is to provide input into the development of guidelines that would govern the use of restraints and the management of delirious patients at St. Michael's Hospital.

University of Toronto

- 2011 May 5 - present Geriatric Psychiatry Subspecialty Postgraduate Education Committee, Toronto, Ontario, Canada.
- 2011 Mar - present **Member**, Toronto Dementia Research Alliance - Data Harmonization Subgroup
My primary role in the alliance is to provide clinical representation of St. Michael's Hospital at alliance meetings and to provide input to the data harmonization subgroup.
- 2007 Jul - present **Member**, Geriatric Mental Health Network Committee
My primary role in the committee is to provide representation for St. Michael's Hospital and to facilitate networking with other teams.
- 2004 Jul - present **Coordinator**, Division of Geriatric Psychiatry Steering Committee
My primary role is to function as a liaison between funding bodies such as the Ministry of Health and the Division of Geriatric Psychiatry to facilitate service delivery.
- 2004 Jul - 2006 **Chair**, Alignment Subcommittee, Toronto Mental Health/Long Term Care Committee
My primary role is to aid in the alignment of outreach teams with Long-Term Care Homes.

Peer Review Activities

ASSOCIATE OR SECTION EDITING

Editor

- 2016 Jan 1 - 2017 Jan 1 Journal of Alzheimer's disease, Journal of Alzheimer's disease

Reviewer

- 2013 Aug 28 Wilfrid Laurier University, Chapter Review: Cognitive consequences of bilingualism: Executive control and cognitive reserve (Ellen Bialyosk and Gus Craik)

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GRANT REVIEWS

Reviewer

2011 Mar - present Alzheimer Association (USA), Number of Reviews: 8
2012 Apr - 2012 May Consortium of Canadian Centres for Clinical Cognitive Research, Number of Reviews: 2

MANUSCRIPT REVIEWS

Reviewer

2017 Feb 24th Health and social care in the community. "Reducing care fragmentation in a psychogeriatrics network: initial experience of video conferencing." HSCC-OA-16-046.

2017 Feb 8th Journal of Health and Aging, "Mastery and depressive symptoms: How does mastery modify the influence of stressors from midlife to old age?" JAH-17-062

2017 Feb 7th Journal of Alzheimer's disease: "The effects of cortical hypometabolism and hippocampal atrophy on clinical trajectories in mild cognitive impairment with suspected non-Alzheimer's pathology: A brief report". 17-0098.

2016 Aug 29-2016 Sept 29 Journal of Alzheimer's disease: "Psychotropic Polypharmacy in Patients with Dementia: Prevalence and Predictors".

2015 Dec 22 - 2016 Jan 8 Diagnostics
2015 Dec 7 St. Michael's Hospital, Neurodegenerative disease management
Manuscript ID NMT-2015-0007 entitled "Dementia and Caregiver Stress". Number of Reviews: 1

2015 Sep 25 - 2015 Dec 15 SAGE open medicine, Number of Reviews: 1

2015 May 26 - 2015 Jun 9 Journal of Aging and Health

2014 Oct 3 - 2014 Oct 10 St. Michael's Hospital, Expert review of neurotherapeutics

2014 Aug 7 - 2014 Aug 15 Psychopathology, Multidisciplinary assessment of patients with musical hallucinations, tinnitus and hearing loss, Number of Reviews: 1

2014 May - 2015 May 21 Psychopathology

2014 Apr 25 - 2014 May 5 Expert Review of Neurotherapeutics, Number of Reviews: 1

2013 Nov 25 - 2013 Dec 4 Botanic: Targets and Therapy

2013 Apr 8 - 2013 May 4 British Journal of Medicine and Medical Research
Age and Aging
Alzheimer Disease & Associated Disorders
BMC Geriatrics
Future of Medicine--Neuropsychiatry
International Journal of Geriatric Psychiatry
Irish Journal of Psychological Medicine
Journal of Health and Aging
Journal of Neurology, Neurosurgery, and Psychiatry
Neuroscience and Biobehavioural Reviews

Scientist Reviews

Baycrest Hospital, February 22 2017

C. Academic Profile

1. RESEARCH STATEMENTS

- 2005 Jul - present Health Systems Issues in Geriatric Psychiatry.
Although I have always had a keen interest in health system issues, this did not emerge as a research interest for me until 2005, when I became part of the Mental Health/Long Term Care committee for the Ministry of Health and chair of the alignment subcommittee. In 2005 I became the recipient of a large MOH funded grant to explore the impact of newly funded psychogeriatric outreach teams on Long Term Care.
As a result of this work, a report was compiled and submitted to the LHIN. This document was used in subsequent reports, both local and national, and has resulted in two publications in scientific journals. Both the reports and publication call for greater integration in the long term care sector, particularly with academic institutions, leading ultimately to increased knowledge translation.
- 1999 Jul - present Delusions and Dementia.
Much of my research throughout my career to date has focused on a relatively neglected field of Geriatric Psychiatry, namely psychosis and dementia. I have published numerous reviews of clinical correlates, neuroimaging correlates, neuropathologic correlates and medication treatment. I have received peer-reviewed funding to explore the functional correlates of these symptoms in Alzheimer's disease. I have also presented on this topic to numerous audiences, both local, national and international, leading to increased awareness of these symptoms and their management.
- 1999 Jul - present Dementia in Specialized Populations (inner city).
A third area of focus in my research is exploring dementia in specialized populations, such as the inner city. Given the inner city location of St. Michael's Hospital and the disparity in socioeconomic status among patients seen, it has provided an ideal opportunity for examining cognitive reserve and related topics.
This has led to peer reviewed funding in areas such as the ses correlates of response to cognitive enhancers and a number of publications focusing on the diagnosis of dementia in the inner city. A recent highlight includes a key paper published in the journal CORTEX identifying that bilingual patients with AD have significantly more brain atrophy for the same level of disease when compared to monolingual patients. I have also presented on this topic to numerous audiences, both local and national, leading to increased awareness of the clinical presentation of dementia in an inner city setting and increased comfort with its management.

2. TEACHING PHILOSOPHY

My approach to teaching and teaching philosophy have been influenced by a number of factors, including my own positive learning experiences as well as feedback from evaluations and the growth of my knowledge. My teaching has been focused primarily in the area of geriatric psychiatry and in the imparting of that knowledge to other learners at multiple levels including the undergraduate level, postgraduate level and the continuing medical education level. I have also in the past few years taken on a number of international as well as local elective students with an interest in geriatric psychiatry and also supervised a number of undergraduate neuroscience research students. My strengths in teaching are primarily in the realm of imparting didactic knowledge and in creating a culture of learning that values curiosity and openness. This is reflected in my evaluations which show particular strength in terms of undergraduate level clinical teaching as well as continuing medical education.

In my initial years, I believed that the function of a teacher was primarily to impart knowledge. This perception has

changed over time. I now believe that it is not only an obligation to impart knowledge but to aid in the process of understanding knowledge. In other words, to put that knowledge into some sort of context that makes it memorable. Over the course of the past few years I have focused my energy more in the area of clinical teaching and identifying clinically relevant teaching moments that can benefit students. One of the primary impediments to my teaching at a clinical level has been time. Due to competing demands on my time as I have progressed academically, unfortunately I have been left with less time to devote to teaching. This has been both a positive and a negative as it has forced me to teach more efficiently. I try now to take advantage of any opportunity I have interacting with learners to provide some meaningful knowledge that will enhance their perception of a problem, whether that knowledge will be in a didactic form or problem-based. I have also tried to respond to learners with more direct and specific feedback, including both undergraduate students as well as medical residents, something that I struggled with in the past. I think my improved teaching evaluations do reflect this more concerted effort.

While I get enjoyment from teaching at all levels, I have to say that my greatest enjoyment is teaching at the continuing medical education level. I feel very privileged when given the opportunity to enhance the knowledge base of large groups. I very much enjoy the challenge of breaking down complex topics so they can be easily understood by the audience. I believe that this has been reflected in my positive continuing medical education evaluations. This is also particularly useful when explaining concepts to undergraduate medical students. I also think that as a teacher, I am very approachable and flexible in my teaching style. This has allowed students to feel very comfortable and at ease with me and to put forth their best effort given that they are not likely to feel threatened or intimidated by me. I have also taken great pleasure in supervising a number of research students who have gone on to present their work at meetings and participate in grants and publications. Ultimately, many of them have gone on to pursue promising careers in fields such as medicine and graduate school. In addition to a teacher being an imparter of knowledge, I also believe a teacher serves as a role model. I have tried to impart to students that I have mentored the importance of a balanced approach to work as well as life in general. I think these qualities, including empathy, compassion and professionalism are something to be emphasized in my teaching interactions.

In summary, although I have particular strengths in the area of clinical undergraduate teaching and continuing medical education, I have continued to persevere in other more problem-based teaching areas such as problem-based learning and post graduate teaching. My improved teaching evaluations demonstrate my success. My plan in the coming years is to continue to focus on these areas in order to develop them more fully in addition to maintaining what is good about my teaching.

3. CREATIVE PROFESSIONAL ACTIVITIES STATEMENT

In my creative professional dossier I will detail accomplishments in the area of Creative Professional Activity since July 1999 when I joined St. Michael's Hospital and more specifically since my last promotion in July 2005. These activities are informed by our department's strategic plan composed of 4 pillars, integration, development, brain and dialogue as well as the strategic plan of St. Michael's Hospital, quality care through knowledge, as well as my own commitment to excellence in clinical care, teaching and research.

In 1999 I took over leadership of geriatric psychiatry services at St. Michael's Hospital, located in the inner city of Toronto. Since that time I have built two state of the art clinical programs, including the Memory Disorders Clinic and the Geriatric Mental Health Outreach Team. I have significantly enhanced hospital funding for these programs, which have significantly improved the quality of care for older patients living in the area of southeast Toronto. I have brokered strong, trusting relationships among a number of stakeholders, including clinicians, frontline service workers, policy makers and patients. Finally, I have used these clinics as a platform for teaching and research, leading to increased grant funding, publications and presentations at local, national and international conferences. This has contributed to the broader dissemination of my work.

In addition to my role in developing geriatric psychiatry services at St. Michael's Hospital, I have also served as the clinical care co-ordinator for the division of Geriatric Psychiatry since 2003. Through this role, I have been able to have significant impact on the development of psychogeriatric services in Toronto and was pivotal in the creation of the Geriatric Mental Health Outreach Network, a program that aims to provide enhanced care for residents living in Long term Care Homes with behavioural symptoms. I was also funded by the MOHLTC to conduct an evaluation of this program which I have gone on to publish and present at scientific meetings. This study has also informed subsequent local, regional and national initiatives in this regard such as "Behavioural Supports Ontario". Finally, I was elected to the board

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of directors of the Canadian Association of Geriatric Psychiatry in 2012. This position has allowed me to have influence over policies and procedures at a national level.

In all of these activities, I have made significant contributions, locally and nationally, through:

- Sustained innovation and creativity in setting up programs designed to serve vulnerable inner city elderly, enhancing collaborative care and contributing to health system co-ordination.
- The development of physician and allied health practices.
- Effectively influencing public policy.
- Peer and non-peer reviewed funding
- Peer and non-peer reviewed publications
- Presentations at local, national and international meetings.

D. Research Funding

1. GRANTS, CONTRACTS AND CLINICAL TRIALS

PEER-REVIEWED GRANTS

FUNDED

Jan 2017—Jan2020 **Principal Investigator. Pivotal study for the Vielight Neuro Gamma Device. Dr. Corinne Fischer**, Dr. Peter Juni, Dr. Tom Schweizer, Dr. Lew Lim, Dr. Rudy Tanzi. The experimental intervention will be the Vielight Neuro photobiomodulation device (PBMT). The control group will receive treatment using an identically appearing sham device, on an identical treatment schedule. The device uses 5 light emitting diodes (810nm wavelength) – see appendix 2.

Diodes are placed on the skull held in position by two lateral aluminium bands, as well as intranasally to target the hippocampus, posterior cingulate cortex, medial prefrontal cortex, precuneus, inferior parietal lobe, and temporal lobe – the nodes of the Default Mode Network. The power density of each transcranial LED diode is: 100 mW/cm² for each of the 3 LEDs on the posterior band, and 75 mW/cm² for one LED on the anterior band. The power density of the single intranasal LED diode is: 25 mW/cm². All diodes are pulsed at a synchronized rate of 10Hz, 50% duty cycle. No significant heat is generated, allowing a sham device to be created which will be indistinguishable from the intervention to both the patients/caregivers and the assessors. Both intervention and sham group patients will be treated in 20 minute sessions once daily for 6 days each week. Patients and caregivers will be taught to use the device at home, and maintain a treatment diary. \$3,000,000.00.

2016 Dec—2017 Dec **Co-Investigator.** The AmyQuant Device: an ultra low dose Positron Emission Tomography counter for the screening and characterization of neurodegenerative disease. Ontario Centres of Excellence's (OCE's) Medical Sciences Proof-of-Principle (MSc PoP). Dr. Joseph Barfett, Dr. Corinne Fischer, Dr. David Munoz, Dr. Luis Fornazzari, Dr. Tom Schweizer. \$55,000.00.

Our group proposes a more efficient and lower radiation dose model for the measurement of cerebral amyloid levels to identify at-risk patients for Alzheimer's Dementia (AD) following an analogous approach to thyroid imaging. Through use of our novel amyloid measurement protocol, we expect that the amyloid uptake (or the uptake normalized to thigh activity) will correlate well to standardized amyloid uptake on a conventional PET scan. Furthermore, we expect that the absolute un-normalized cerebral amyloid activity measurements obtained using our novel protocol and specialized brain PET tracer activity detector will strongly agree with the results obtained from a conventional amyloid PET scan. Finally, we expect that results obtained from our new test and a conventional PET scan will correlate strongly to the clinical presence of AD. Overall, we believe that the results of our project will allow for earlier detection, monitoring and intervention in younger at-risk patients to delay onset of AD.

2016 Sep - 2017 Sep **Principal Investigator.** The impact of passive music listening on neuropsychiatric symptoms in Alzheimer's disease. CCNA. CIHR. Collaborator(s): Luis Fornazzari, Tom Schweizer, Michael Thaut. 19,000 CAD. [Grants]

The CCNA Team 11 goals are for the prevention and treatment of behavioural symptoms of dementia in long term care. Music has already been identified as a low cost therapeutic modality in NPS. Our study will build on this existing knowledge base by comparing passive listening to familiar music to usual care and by examining the neural circuits involved in this process. The findings of our study will be used to tailor music interventions in a larger study and further our understanding of the neural networks that are involved in NPS.

2016 Jul - 2019 Jul

Co-Investigator. Using functional MRI to evaluate cognitive predictors of driving in MCI. Alzheimer Association. Alzheimer Association. PI: Schweizer, Tom. Collaborator(s): Churchill, Nathan; Graham, Simon; **Fischer, Corinne**. 147,000 USD. [Grants]
Previous research, including our own data, consistently demonstrates that patients with mild cognitive impairment (MCI) may be at increased risk of driving impairment. Despite the wide spread prevalence of MCI and its potential impact on driving, there are no published guidelines specifying when patients with MCI should be considered unsafe to drive. Furthermore, there are no tools with sufficient validity to assist healthcare professionals in assessing the driving fitness of MCI patients. The current study aims to combine functional magnetic resonance imaging (fMRI), driving simulation, and tablet technologies to determine whether the brain activation patterns associated with specific neurocognitive tests are predictive of the driving behaviours, and associated neural networks, of patients with MCI. The results of this study will provide direct empirical evidence regarding the utility of these neurocognitive tests in assessing the driving fitness of MCI patients and will inform the development and implementation of other valid and clinically useful tools.

2016 Jan - 2018 Jan

Co-Investigator. The Toronto Dementia Research Alliance Dementia Clinical Research Database: A Platform in Neurodegenerative Disease. Brain Canada. Brain Canada. PI: Freedman, Morris; Tang-Wai David. Collaborator(s): Mario Masellis, **Corinne Fischer**, Sandra Black, Paula Rochon, Bruce Pollock, Stephen Strother, Barry Greenberg, Alan Moody. 2,996,848 CAD. [Grants]
The TDRA clinics have the potential to develop one of the largest, prospective, real-world tertiary cohort studies as a unique demonstration project of research-embedded in care. Through the 2000 new patients and 4000 follow-ups seen annually among the TDRA clinics, the understanding of disease pattern and progression through access to clinical and imaging data in this platform will enable design of clinical trials for better prediction of the most appropriate therapeutic courses and improved disease outcomes. The proposed platform offers an economically efficient partnership between two public services fundamental to the Canadian way of life - the research university and our health care system - and provides the potential not only to improve care but also to create the future of care by providing a platform for rapid translation from bench to bedside. This platform can provide opportunities for integration with provincial, national and global initiatives. As preliminary examples, TDRA has played central roles in the OBI-funded cohort study across neurodegenerative dementias (ONDR) and in the newly inaugurated CIHR-funded national research initiative, CCNA. By hosting the proposed platform in BrainCode, after an agreed upon exclusivity period and with proper data access and review processes, de-identified data will become available to other qualified neuroscience researchers. Brain Canada supports linkage of BrainCODE data sets with CCNA through the PSG, "CBRAIN: Canadian Brain Research and Informatics Platform" (PI: Alan Evans).

2015 Mar - 2016 Mar

Principal Investigator. The neural correlates of delusions in patients with Alzheimer's disease. St. Michael's Hospital. Medical Imaging Pilot Study. 20,000 CAD. [Grants]
This grant is an exploratory pilot study examining resting state fMRI in AD patients with delusions.

2015 Jan - 2019 Feb

Co-Investigator. "ALEVIATE - A randomized controlled trial of levetiracetam to reduce hippocampal volume loss in subjects with amnesic mild cognitive impairment". W. Garfield Weston Foundation. Weston Brain Institute. CT140093. PI: Nathan Herrmann. Collaborator(s): **Corinne Fischer**,

Sandra Black, Mario Masellis, Barry Greenberg, Krista Lanctot, David Tang Wai, Donald Weaver, Stephen Strother, Bruce Pollock, Sanjeev Kumar, Rosanna Olsen, Mary Pat McAndrews, Alex Kiss. 1,499,998 CAD. [Grants]

Accumulating clinical and preclinical evidence indicates that excessive neuronal excitability in the medial temporal lobe (MTL) structures may play a causal role in progression of pathology in amnesic mild cognitive impairment (aMCI) to Alzheimer's Disease (AD) dementia. We propose a phase IIa randomized placebo-controlled trial of levetiracetam (LEV) to reduce this excitability and thus delay symptom progression in subjects with aMCI. This is a 1 year long repurposing study which will use a low dose of a generic, Health Canada approved drug, with a lengthy history of safety and excellent tolerability for the treatment of seizure disorders.

2014 Jul - 2019 Jul

Co-Investigator. Prevention and Treatment of Neuropsychiatric Symptoms of Dementia in Long Term Care. CIHR-CCNA. CCNA. PI: **Fischer, Corinne**. Collaborator(s): Herrmann, Nathan;Ismail, Zahinoor;Lanctot, Krista;**Fischer, Corinne**;Raji, Tark; Burhan, Amer;Davies, Simon;Pollock, Bruce; Bruneau, Marie-Andre;Thorpe, Lillian;Landreville, Philippe; 1,011,616 CAD. [Grants]

We propose to establish a representative network of Canadian LTC facilities to enable evaluation of innovative pharmacological, non-pharmacological, and educational interventions using randomized controlled trials. These projects will be aimed at preventing the development of NPS, and minimising their severity, duration and impact. We envision recruiting up to 30 LTC facilities across Canada with representation from every region and including both urban and rural settings and for profit and not-for-profit LTC facilities. We intend to build research capacity in these institutions by training staff, developing common assessment instruments, and instituting electronic data capture systems for a common trials database.

2014 Jul - 2019 Jul

Co-Investigator. Prevention of Alzheimer's Dementia in High Risk Populations: a Randomized Controlled Trial of a Combination of Cognitive Remediation and Brain Stimulation. Brain Canada MIRI grant. PI: Benoit Mulsant, Bruce Polloc, Traek Rajji. Collaborator(s): Nathan Herrmann, Alistair Flint, Andrea Iaboni, Mark Rappaport, Tiffany Chow, Sandra Black, **Corinne Fischer**, Jeff Daskalakis, Aristotle Voineskos, Ariel Schaffer. 9,996,087 CAD. [Grants]

2014 Jul - 2017 Jul

Co-Investigator. Z-BRAIN: A Zebrafish Drug Screening Platform Targeting Brain Disorders. Brain Canada. Brain Canada. PI: Xiao-Yan Wen. Collaborator(s): Pierre Drapeau, Raymond Andersen, Robert Gerlai, Jonathan Brochie, Georg Zoidl, Loch Macdonald, Andrew Baker, Albert Wang, Marc Ekker, Sidney Kennedy, Alan Fin, Janice Robertson, Vince Tropepe, Henry Klause, Terry Van Raay, Tom Schweizer, David Munoz, **Corinne Fischer**, Thomas Steeve, Ted Allison, Cheryl Gregory-Evans, Claudia dos Santos. 2,620,000 CAD. [Grants]

This CNS drug discovery platform will be centered on existing CFI-funded drug screening infrastructure recently installed at St. Michael's Hospital in Toronto, which allows robotic screens of multiwell microplates using "humanized" or fluorescently/luminescently labeled zebrafish embryos, carrying human transgenic mutations or with functional gene knockout. The platform is a state-of-the-art system that can perform fully automated screens from fish embryo sorting and drug dosing to efficacy readouts. The system is operated by robotic arms and customized screening software. The Brain Canada PSG funding will greatly improve the platform's performance by hiring new research staff to run the platform for the associated computer and mechanical engineering work, drug database development and chemical informatics. It will also be used for drug screening tool development and obtaining new compound libraries for drug screens.

2014 Jul - 2016 Jul

Co-Investigator. Driving in Alzheimer's Disease and Mild Cognitive Impairment: An

immersive fMRI study. Alzheimer Society of Canada. Alzheimer Society Research Program. PI: Schweizer, Tom. Collaborator(s): Fischer, CE, Graham S. 149,926 CAD. [Grants]
There are currently no gold-standard paper-and-pencil based tests, computer-based measures, or on-road assessments that are able to accurately assess the driving fitness of individuals with cognitive impairment. Using our novel functional MRI combined with our fully-immersive MR compatible driving simulator, we will, for the first time, identify the brain activation patterns of patients with mild cognitive impairment (MCI) and early Alzheimer's disease (AD) while they are performing driving manoeuvres of increasing levels of complexity and compare them to those of healthy age-matched controls. Identifying the neural networks implicated in driving impairment in individuals with MCI and AD will be an important first step to the establishment of accurate driving evaluations and rehabilitation strategies.

2014 Apr - 2016 Apr

Principal Investigator. Neuroimaging correlates of delusions in Alzheimer's disease and related disorders. Canadian Institutes of Health Research (CIHR). Catalyst Grant: Secondary Analyses of Neuroimaging Database. 313912. Collaborator(s): Schweizer T, Ismial Z, Millikin C, Shelton P, Munoz D, Lix L, Smith E. 98,390 CAD. [Grants]
Our primary objective is to test for differences in brain structure (1.5 Tesla MRI, neuropathology) associated with delusions in AD and related dementias and to correlate brain structure characteristics with clinical measures including vascular risk status (Hachinski score), disease severity (CDR), cognitive status (MMSE), delusional severity (NPI-Q delusional subscore), behavioural severity (NPI-Q total) and functional status (FAQ).

2013 Jul - 2016 Jul

Co-Investigator. Validation of ocular measures as potential biomarkers for early detection of brain amyloid and neurodegeneration. W. Garfield Weston Foundation - Brain Canada Multi-Investigator Research Initiative (MIRI). Brain Canada Multi-Investigator Research Initiative. PI: Dr. Sandra Black. Collaborator(s): Dr. Sandra E. Black, Dr. Anthony E. Lang, Dr. Christopher Hudson, Dr. Lee Goldstein
Dr. Barry Greenberg, Dr. Efram Mandelcorn, Dr. Ed Margolin, Dr. Stephen Strother, Dr. Aristotle Voineskos, Dr. Victor Yang, Dr. David Tang-Wai, Dr. Morris Freedman, Dr. Carmela Tartaglia
Dr. Tiffany Chow, Dr. Corinne Fischer, Dr. Mario Masellis, Dr. Bruce Pollock, Dr. Richard Swartz,
Dr. John Valliant, Dr. Sylvain Houle, Dr. Curtis Caldwell, Dr. Ekaterina Rogaeva, Dr. A. Kiss. 1,498,490 CAD. [Grants]
Five hundred thousand Canadians have dementia, a number that will double within a generation due to the ongoing aging demographics of the population, with annual costs estimated to increase from \$15 billion currently to over \$150 billion by the year 2050. The estimated total cost to the society including the loss of productivity by the caregivers, is predicted to be \$872B. Delaying dementia onset by 2 years would reduce this cost by \$219B. Diagnosis very early in the course of disease will be required to accomplish this goal. Brain imaging or a spinal tap is currently required to identify people at early stages of the disease, but such procedures are either too costly or invasive to be used broadly for screening and early detection. Hence, we plan to test two non-invasive measurements performed in the eyes to identify patients at early disease stages. One of these (spectral domain optical coherence tomography) involves assessment of changes in the nerves and blood vessels in the retina. The other (an infrared laser quasi-elastic light scattering procedure) has been developed to detect pathology related to a key protein called beta-amyloid (involved in development of AD) in the lens of the eyes prior to its accumulation in the brain. The effectiveness of these techniques will be tested by comparing them with brain imaging (MRI) and clinical, cognitive, behaviour, mood and functional assessments. We plan to study 60 normal elders, 65 patients with mild cognitive impairment, 65 with AD, 65 with Lewy Body Disease and 60 with Vascular Cognitive Disorders. Selected patients will also undergo an assessment of retinal blood vessels and positron emission tomography (PET) to evaluate brain beta-amyloid. All patients will be recruited from the affiliated memory, stroke and movement disorder clinics of the Toronto Dementia Research Alliance. If these eye measurements are found effective in identifying patients with dementia at early stages of disease, it would open new opportunities for earlier deployment of investigative treatments,

with impact on clinical care and economic costs.

2013 Jul - 2014 Jun

Co-Investigator. Driving and the aging brain: an immersive fMRI study. Canadian Institutes of Health Research (CIHR). CIHR operating grant. 2528. PI: Schweizer, Tom. Collaborator(s): Bedard, Michelle; Hung, Y;**Fischer, Corinne**;Naglie, Gary;Graham, Simon. 200,000 CAD. [Grants]

The current project aims to provide direct, empirical evidence in a continuous range of age cohorts to investigate how aging impacts the neural correlates of driving behavior. We use functional magnetic resonance imaging (fMRI) combined with a novel driving simulator to examine in vivo brain responses while older drivers are performing a variety of simulated driving tasks. Our team has successfully developed an immersive, 3.0 Tesla MRI compatible driving simulator system. This advanced set-up allows us to successfully localize brain activations responsible for different real-life driving behavior in the older drivers in a safe environment as compared to young drivers. Results of the current study will establish an important knowledge base for better selection and future development of objective and office-based driving assessment tools, including neuropsychological tests, as well as targeted rehabilitation strategies, which will ultimately improve the health care system for older generations in Canada.

2013 May - 2014 Jun

Co-Investigator. Development and Stability of Delusions Across the Spectrum from Normal Aging to Dementia. University of Manitoba Program: University Research Grants Program. University of Manitoba Program: University Research Grants. 41327. PI: Colleen Millikin. Collaborator(s): **Corinne Fischer**, Zahinoor Ismail. 7,481 CAD. [Grants]

Delusions, rigidly-held false beliefs, occur in up to 50% of people with Alzheimer's disease (AD)(1), as well as in a small proportion of patients with mild cognitive impairment (MCI, a condition associated with an increased risk of dementia)(2)(3)(4)(5). Compared to patients with dementia without delusions (D-), those with delusions (D+) tend to have more rapid progression of cognitive impairment(3)(6)(1)(7)(8), lose independence in activities of daily living more quickly(9)(10), and transfer to long-term care earlier in the disease course(11). The presence of delusions in dementia is also associated with aggressive behavior(12)(13)and increased caregiver stress(14)(10). In our pilot work using data from the Alzheimer's Disease Neuroimaging Initiative (ADNI) database, we found that 81% of participants with MCI who developed delusions were diagnosed with probable AD during study participation, including 8 in whom delusions preceded the dementia diagnosis. Greater understanding of how and why people with dementia develop delusions is crucial to efforts to prevent and treat these symptoms. Most studies to date have examined delusions late in moderate to severe dementia (15)(16). Most research is cross-sectional in design, and many reports have not distinguished patients with hallucinations from those with delusions. Delusions are more frequent than hallucinations, and they appear to have a different underlying biological substrate(17).Little is known about the natural history of delusions and the extent to which they are stable over time. The current project proposes to examine factors associated with the development and stability of delusions over time in a large database (National Alzheimer's Coordinating Centers, NACC) that includes initial visit data on over 23,000 people who initially presented with normal cognition, MCI, or dementia (various subtypes). We anticipate that the majority of participants will have data for one or more follow-up visit.

2013 Mar - 2014 Mar

Collaborator. Using the General Public to Estimate Health-related Quality-of-life in Alzheimer's Disease: Development and Validation of Clinical Vignettes. Canadian Institutes of Health Research (CIHR). Operating grant--Priority Announcement: Aging. 5000.00. PI: Oremus, Mark. Collaborator(s): PULLENAYEGUM, Eleanor M, Cowan D, Lanctot K, Herrmann N, Fischer CE, Verhoeff NP, Lee PE. 100,000 CAD. [Grants]

Quality-of-life (QoL) is important in Alzheimer's disease (AD) because no cure exists. Measuring QoL provides a way of assessing the 'humanistic element' of AD treatments. Patients and caregivers currently estimate QoL in AD by answering questionnaires. Question responses are converted into scores ranging from 0 (worst possible QoL or death) to 1

(perfect health). However, patients and caregivers give different QoL scores and very sick AD patients often cannot answer QoL questionnaires. We will examine whether the general public can provide QoL scores in place of patients and caregivers. To do this, we will develop stories describing what happens to people who have mild, moderate, and severe AD. Patients, caregivers, and physicians will help us develop these stories. Afterward, we will conduct a survey that contains the stories and see if a sample of the general public in Canada gives QoL scores that decrease as disease severity increases.

2013 Mar - 2014 Mar

Co-Principal Investigator. Neuroimaging Profiles of Neuropsychiatric Subgroups in Mild Cognitive Impairment and Early Alzheimer's Disease. Canadian Institutes of Health Research (CIHR). Catalyst Grant: Institute of Aging. PI: Millikin, Colleen; **Fischer, Corinne**. Collaborator(s): Ismail, Zahinoor; Schweizer, Tom; Chow, Tiffany; Lix, Lisa, Shelton, Paul. 50,000 CAD. [Grants]
Our study is the first to examine structural brain changes longitudinally in AD/MCI-D+ patients and to use FDG-PET to study brain function longitudinally in this group. Our plan to correlate neuropsychological profiles and functional decline with neuroimaging findings is also unique. We anticipate that our results will be of benefit to patients and caregivers (information about risk factors and prognosis), clinicians (possible ways of evaluating response to medication), and researchers (methods for combining neuroimaging and behavioral variables in a longitudinal study). Ultimately, we hope to provide techniques for identifying AD-D+ early in the disease course so that appropriate treatment and caregiver support can be given. This will help reduce some of the excess disability associated with delusions in patients with MCI and AD.

2012 Mar - 2017 Mar

Co-Investigator. Improving Performance in Drivers with Mild Cognitive Impairment: An RCT of Cognitive Aging. Canadian Institutes of Health Research (CIHR). Operating Grant. PI: Naglie, Gary. Collaborator(s): Binns, Malcolm; **Fischer, Corinne**; Levine, Brian; Black, Sandra; Freedman, Morris; Schweizer, Tom; Bedard, Marion; Herrmann, Nathan; Tang-Wai, David; Dawson, Deirdre; Korner-Bitensky, Nicol. 562,765 CAD. [Grants]
Driving is the primary source of transportation for older adults. Loss of driving privileges is often considered catastrophic by older adults and can result in serious adverse consequences such as social isolation, depression and loss of independence. Mild cognitive impairment (MCI) has been found to be associated with diminished driving performance. Clinicians and policy makers are challenged by the growing numbers of older drivers with MCI and the need to maintain their mobility to allow them to retain their functional autonomy. Currently, physicians have nothing to offer these individuals to improve/maintain their driving performance and to potentially prolong the time that they are able to drive safely, as well as allow them more time to prepare for driving retirement. Executive function and processing speed are recognized critical correlates of driving performance and have been shown to decline in older adults and in persons with MCI. Members of our research team have shown that group executive function training such as Goal Management Training (GMT) results in benefits for healthy older adults, including improved simulated daily activities. A previous study has shown that computerized processing speed training (PST) may reduce crash rates in healthy older adults. The ultimate purpose of our research is to develop interventions to help maintain older adults' mobility in order to assist their 'aging at home'. To address this purpose, the planned study will assess the effectiveness of an intervention (GMT + PST) designed to address both executive function and processing speed changes that contribute to poor driving performance in people with diagnosed MCI.

2011 Oct - 2012 Oct

Collaborator. Tablet Technology for Assessing Dementia. Canadian Institutes of Health

Research (CIHR). Proof of Principle Grant. PI: Graham, Simon. Collaborator(s): Schweizer, Tom; Strothers, Stephen; **Fischer, Corinne**. 116,402 CAD. [Grants]

The purpose of this grant is to determine the effectiveness of an fMRI compatible tablet for evaluating cognition. Patients with a wide range of cognitive abilities would be assessed for the purpose of establishing the utility of the technology.

2008 Jul - 2009 Jul

Co-Investigator. Cognitive Rehabilitation in a Population of Adults with Mild Cognitive Impairment. Canadian Institutes of Health Research (CIHR). Catalyst Grant. 90199. PI: Schweizer, Tom. Collaborator(s): **Fischer, Corinne**; Levine, Brian; Rourke, Sean; Stuss, Donald; Winocur, Gordon. 49,146 CAD. [Grants]

The purpose of this pilot grant is to apply a model of cognitive rehabilitation previously validated in older adults to a sample of patients with MCI (mild cognitive impairment) to determine if it can provide enhanced cognitive benefits when compared to a control (non-rehab) module. The rehab module would consist of memory skills training, goal management attainment and psychosocial skills training while the control group would receive only psychosocial skills training.

2008 Apr - 2010 Apr

Co-Principal Investigator. Determining the Impact of Delusions on Functional Impairment In patients with Alzheimer's Disease. Alzheimer Society of Canada. Quality of Life Grants Competition. 0967. PI: Schweizer, Tom. Collaborator(s): Dawson, Deirdre; Herrmann, Nathan; Rourke, Sean. 122,085 CAD. [Grants]

The purpose of the grant is to determine to what extent delusions in patients with Alzheimer's disease impair real world functional performance. The hypothesis being tested is that as delusions have been linked to hypofrontality and impaired functional ability has also been linked to hypofrontality, patients with delusions would be expected to show greater functional impairment. The study would be involve comparing AD patients with and without delusions on a number of functional and behavioural measures.

2007 Mar - 2008 Mar

Principal Investigator. Evaluation of the Toronto Geriatric Mental Health Network. Ontario Ministry of Health and Long-Term Care. 6128. Collaborator(s): Hoch, Jeffrey; Rourke, Sean; Stephens, Anne; Cohen, Carole; Walsh, Joanne; Read, Nancy; Ringer, Lee; Golea, Gaby; Sadavoy, Joel; Wasylenki, Donald. 175,000 CAD. [Grants]

The purpose of this grant is to evaluate the impact of adding newly funded psychogeriatric outreach teams to Long Term Care Homes in the Greater Toronto Area. This evaluation involves using mixed methods, including qualitative data (surveys from LTCH's and teams) and quantitative data (retrospective chart review of team charts). The objective is to determine if the enhanced funding added benefit while identifying what gaps in the system needed still to be addressed.

2007 Jan - 2008 Jan

Principal Investigator. Determining the Impact of Dementia and Executive Impairment on Antidepressant Treatment Response in Older Persons. Drummond Foundation (The). Pilot Grant. Collaborator(s): Atkins, Jana; Herrmann, Nathan; Nisenbaum, Rosane; Rourke, Sean. 40,000 CAD. [Grants]

The purpose of this pilot grant is to compare antidepressant treatment response in patients with dementia versus those without dementia. We hypothesized that treatment with Sertraline would result in a worse treatment response in patients with dementia versus those without dementia due to predicted worse executive function in patients with dementia.

2002 Jun - 2007

Principal Investigator. Predictors of Response to Cognitive Enhancers Among Patients with Alzheimer's Disease Living in the Inner City of Toronto. University of Toronto. Dean's Fund New Staff Grant. 452655. Collaborator(s): Norris, Mireille; Rourke, Sean. 10,000 CAD. [Grants]

The purpose of this grant is to compare patients with low and high socioeconomic status (SES) living in inner the city of Toronto in terms of their response to cognitive enhancers. We hypothesized based on the theory of cognitive reserve that low SES AD patients would have a worse response compared to high SES AD patients.

NON-PEER-REVIEWED GRANTS

FUNDED

2016—present Principal Investigator. **Prevalence of serum NMDAR autoantibodies in first-episode psychosis. Mitogen Labs. Collaborators: Corinne Fischer, David Munoz, Tom Schweizer, Zahinoor Ismail, Gregg Day, Marvin Fritzler. \$5000.00 (industry)**

Our study will provide critical information regarding the feasibility and applicability of screening for NMDAR encephalitis among patients presenting with FEP, something never done before. This knowledge could be used to inform screening guidelines for patients presenting with FEP. As well, our study will ensure that patients in our sample who have this disorder and present with psychiatric symptoms are screened for this condition and, if identified, will be offered appropriate treatment, thus leading to better treatment outcomes, improved quality of life and cost savings. Moreover, by better characterizing the imaging and clinical correlates of this population we hope to better understand the underlying neurologic mechanisms leading to the development of psychotic symptoms in related disorders, potentially leading to the development of novel treatment approaches

2009 Aug - present **Principal Investigator.** Funding for a Multidisciplinary Memory Disorders Clinic. St. Michael's Hospital Foundation. Heather and Eric Donnelley Endowment. Collaborator(s): Schweizer, Tom. 448,000 CAD. [Donations]
The purpose of this funding is to provide seed money for pilot projects in Alzheimer's disease at St. Michael's Hospital.

2013 May - 2013 Aug **Principal Investigator.** Analysis of inner city memory clinic database. Li Ka Shing Knowledge Institute. Summer Studentship. 2,500 CAD. [Grants]
The purpose of this funding is to finance the hiring of a summer student to conduct analyses of our memory clinic database.

2008 Nov **Co-Investigator.** Art and the Brain. Lundbeck Canada Inc. Educational grant. PI: Fornazzari, Luis. Collaborator(s): Ringer, Lee; **Fischer, Corinne**. 1,500 CAD. [Industrial Grants]
This educational grant funded a presentation at a local Long Term Care Home (Wellesley Central Place) highlighting the work of a local artist (Mary Hecht) and also providing information on how art can enhance brain function.

2006 Aug - 2007 Aug **Principal Investigator.** Funding for a Multidisciplinary Memory Clinic. Novartis Pharma Canada Inc. Educational grant. Collaborator(s): Atkins, Jana; Rourke, Sean. 5,000 CAD. [Industrial Grants]
The purpose of this grant was to provide seed funding for our memory clinic. The funds would be used to help hire a part time data entry clerk, to finance travel to conferences or to purchase necessary supplies for the clinic.

2004 Jun - 2005 Jun **Co-Investigator.** Funding for a Multidisciplinary Memory Clinic. Pfizer Canada Inc. Educational grant. PI: Norris, Mireille. Collaborator(s): **Fischer, Corinne**; Rourke, Sean. 10,000 CAD. [Industrial Grants]
The purpose of this grant is to provide seed funding for our memory clinic. The funds would be used to help hire a part time data entry clerk, to finance travel to conferences or to purchase necessary supplies for the clinic.

2003 Sep - 2005 Sep **Principal Investigator.** Predictors of Response to Galantamine Among Patients with Alzheimer's Disease Living in the Inner City of Toronto. Janssen Research Foundation. Collaborator(s): Norris, Mireille. Rourke, Sean. 24,000 CAD. [Clinical Trials]

Corinne FISCHER

The purpose of this grant is to provide seed funding for a pilot study examining the impact of socioeconomic status on response to cognitive enhancers among patients living in the inner city of Toronto. The funds would supplement the Dean's Fund grant and would be used to assist in the hiring of a part-time research assistant, office supplies and/or equipment.

2001 Jan - 2003 Jan

Co-Investigator. Galantamine in the Treatment of Multi-infarct Dementia (GAL INT-26). Janssen Research Foundation. PI: Farcnik, Karl. Collaborator(s): Carlen, Peter; **Fischer, Corinne**. 70,000 CAD. [Clinical Trials]

The purpose of this multi-centred study was to examine the effectiveness of a cognitive enhancer, galantamine, in the treatment of vascular dementia. Funds would be used to assist in the hiring of a part-time research assistant, to purchase supplies and equipment, etc.

2. SALARY SUPPORT AND OTHER FUNDING

Match funding

2013 Jul - 2018 Jul

OBI Integrated discovery neurodegeneration project. Ontario Brain Institute. 28,500,000 CAD. Toronto, Ontario, Canada. (Specialty: Neurology).

E. Publications

1. MOST SIGNIFICANT PUBLICATIONS

1. Dr. **Corinne Fischer***, Windsor Kwan-Chun Ting*, Dr. Colleen Millikin, Dr. Zahinoor Ismail, Dr. Tom A. Schweizer. Grey Matter Atrophy in Patients with Mild Cognitive Impairment / Alzheimer Disease Over the Course of Developing Delusions. International Journal of Geriatric Psychiatry. 2015 Mar 6. In Press. **Principal Author**.

This study was funded by CIHR and uses voxel based morphometry to compare AD patients with delusions pre and post delusion onset. It is the first longitudinal study of it's kind to address this question. The study found that onset of delusions was associated with focal atrophy in the left posterior hemisphere, including the cerebellum and areas that correspond to the default mode network. Thus, it suggests that delusions in patients with AD may be associated with morphological changes in the posterior left hemisphere, including the cerebellum and default mode network, providing a potential target for therapeutic intervention.

2. Windsor Kwan-Chun Ting; Corinne E. Fischer; Colleen P. Millikin.; Zahinoor Ismail.; Tiffany W. Chow.; Tom A. Schweizer. Grey Matter Atrophy in Mild Cognitive Impairment / Early Alzheimer Disease Associated with Delusions: A Voxel-Based Morphometry Study. Current Alzheimer's Research. 2014 Sep 19. In Press. **Coauthor or Collaborator**.

This study was funded by CIHR and was a cross-sectional comparison of AD patients with and without delusions using voxel-based morphometry. We compared a sample of AD patients from the ADNI database with delusions to a matched sample of patients without delusions, hypothesizing that based on our previous work differences would be observed in the right frontal cortex. Significant voxel clusters were observed in the right inferior frontal gyrus, the right precentral gyrus and the right insula consistent with our hypothesis. This study provides confirmation that delusions in AD may arise from damage to the right frontal cortex and provides a target for therapeutic intervention.

3. Winnie Qian, Tom Schweizer, **Corinne Fischer**. Impact of Socioeconomic Status on Initial Clinical Presentation to a Memory Disorders Clinic. *International Psychogeriatrics*. 2014 Apr 1. 2014;26(4):597-603. Impact Factor 2.188 (Trainee publication). **Senior Responsible Author**.

This paper examined the impact of socioeconomic status on clinical presentation to a memory disorders clinic located in the inner city of Toronto. We demonstrated that patients with low SES, when compared to patients with high SES, were more likely to present with moderate dementia as opposed to MCI or mild dementia. In addition, patients with low SES compared to patients with high SES were less likely to be put on cognitive enhancing medication or comply with follow up. These findings have important public policy implications as they suggest that patients most vulnerable to developing dementia (low SES patients) are the least likely to obtain treatment. Our article was selected for profiling on the website "World Biomedical Frontiers".

4. Fischer CE, Schweizer TA. How does speaking another language reduce the risk of dementia? *Expert Review of Neurotherapeutics*. 2013 Dec 20;14(5):469-471. **Principal Author**.

This article provides a state of the art overview of the current literature on bilingualism and dementia. It summarizes the existing studies, which combined indicate that bilingualism may delay the onset of Alzheimer's disease by as much as five years. It references our own study, originally published in 2011 in the journal Cortex, which provided the first physical proof that bilingualism may delay the onset of AD. It also postulates what brain mechanisms may underlie this phenomenon based on current research and points to the need for further studies exploring the neuroanatomical mechanisms of cognitive reserve.

5. **Fischer C**, Ismail Z, Schweizer TA. Delusions increase functional impairment in Alzheimer's disease. *Dementia and Geriatric Cognitive Disorders*. 2012;33:393-399. Impact Factor 2.787. **Principal Author**.

This article examined the impact of delusions on functional performance in patients with Alzheimer's disease. Specifically, 38 patients from the St. Michael's Hospital Memory Disorders clinic who were well matched on clinical variables, 19 with and 19 without delusions, were compared on measures of everyday function. The sample with delusions had significantly worse functional performance than the sample without delusions. Furthermore, patients with delusions had greater frontal lobe dysfunction, more behavioural symptoms and increased caregiver burden. The findings from this study provide the first evidence that delusions increase functional impairment, irrespective of cognitive decline. The study has broad implications for patient management as patients with Alzheimer's disease and delusions may be more vulnerable to functional decline and therefore should be screened more rigorously for this. This study was profiled on the Alzheimer society of Canada website.

2. PEER-REVIEWED PUBLICATIONS

Journal Articles

1. Julia Kim, **Corinne E Fischer**, Tom Schweizer, David Munoz. Gender and Pathology-Specific Effect of Apolipoprotein E Genotype on Psychosis in Alzheimer's Disease. *Current Alzheimer's Research*. In press.
2. Zahinoor Ismail M.D.^{1,2}, Luis Agüera-Ortiz M.D., Henry Brodaty M.D., Alicja Cieslak M.D., Jeffrey Cummings M.D., Corinne Fischer M.D., Serge Gauthier M.D., Yonas E. Geda M.D., Nathan Herrmann M.D., Jamila Kanji BSc., Krista Lanctot PhD⁴, David Miller M.D., Moyra Mortby PhD., Chiadi Onyike M.D., Paul Rosenberg M.D., Eric E. Smith M.D., Gwenn Smith PhD, David Sultzer M.D., Constantine Lyketsos M.D.³ for the NPS Professional Interest Area of the International Society of to Advance Alzheimer's Research and Treatment (NPS-PIA of ISTAART). The Mild Behavioural Impairment Checklist: A rating scale for neuropsychiatric symptoms in pre-dementia populations. *Journal of Alzheimer's disease*. November 28 2016. In press.

3. Zahinoor Ismail MD^{1,2}, Heba Elbayoumi BScPharm², Corinne E. Fischer MD³, David B. Hogan MD^{1,4}, Colleen P. Millikin PhD⁵, Tom Schweizer PhD³, Moyra E. Mortby PhD⁶, Eric E. Smith MD¹, Scott B. Patten MD PhD^{1,2}, Kirsten M. Fiest PhD. Prevalence of Depression in Mild Cognitive Impairment (MCI): A systematic review and meta-analyses. JAMA psychiatry. September 29 2016. In press.
4. Fischer, Corinne E; Sweet, Robert A. Psychosis in Alzheimer's disease: a review of recent research findings. Current Behavioural Neurosciences. September 29 2016. In press.
5. Simrin Sennik¹, Tom A. Schweizer^{1,2,3,4,5}, PhD; Corinne E. Fischer^{1,6}, MD, David G. Munoz^{1,7,8}, MD. Risk factors and pathological substrates associated with Agitation/Aggression in Alzheimer's disease. Journal of Alzheimer's disease. 2016 Aug 11. In Press. **Coauthor or Collaborator**.
6. Mansur, Ann; Schweizer, Tom A; Fischer, Corinne E; Fornazzari, L: Always in Tune: the unforgettable memory for music in Alzheimer's Disease. Canadian Journal of Neurological Sciences. In press. **Co-author or Collaborator**
7. Corinne E. Fischer, Angela Golas, Tom A. Schweizer, David G. Munoz, Zahinoor Ismail, Winnie Qian, David Tang-Wai, Dalia Rotstein, Gregory S. Day. Anti-NMDA receptor encephalitis: A game changer? Expert review of neurotherapeutics. 2016 Apr 26. In Press. **Principal Author**.
8. Hird, M. A., Egeto, P., Fischer, C. E., Naglie, G. & Schweizer, T. A. A systematic review and meta-analysis of on-road, simulator, and cognitive driving assessment in Alzheimer's disease and mild cognitive impairment. Journal of Alzheimer's disease. 2016 Apr 21. In Press. **Coauthor or Collaborator**.
9. Andrea Iaboni, **Corinne Fischer**, Damien Gallagher. Neuropsychiatric symptoms in mild cognitive impairment: an update on prevalence, mechanisms and clinical significance. Canadian Journal of Psychiatry. 2016 Apr 4. In Press. **Coauthor or Collaborator**.
10. Fischer CE, Qian W, Schweizer TA, Millikin CP, Ismail Z, Smith EE, Lix LM, Shelton P, Munoz D. Lewy Bodies, Vascular risk factors and Subcortical Arteriosclerotic Leukoencephalopathy, but not Alzheimer pathology, are associated with development of psychosis in Alzheimer's disease. Journal of Alzheimer's Disease. Journal of Alzheimer's Disease. 2016 Jan 6(50):283-295. **Principal Author**.
11. Dr. **Corinne Fischer***, Windsor Kwan-Chun Ting*, Dr. Colleen Millikin, Dr. Zahinoor Ismail, Dr. Tom A. Schweizer. Grey Matter Atrophy in Patients with Mild Cognitive Impairment / Alzheimer Disease Over the Course of Developing Delusions. International Journal of Geriatric Psychiatry. 2015 Mar 6. In Press. **Principal Author**.
12. Mahta Karimpoor, Fred Tam, Stephen C Strother, **Corinne Fischer**, Tom A Schweizer, Simon James Graham. A Computerized Tablet with Visual Feedback of Hand Position for Functional Magnetic Resonance Imaging. Frontiers in Human Neuroscience. 2015 Mar 4. In Press. Impact Factor 2.9. **Coauthor or Collaborator**.
13. Dr. Luis Fornazzari MD FRCPC, Ann Mansur HBSoc, Dr. Tom A. Schweizer PhD, Dr. Corinne E. Fischer MD FRCPC. Proust and Madeleine: Together in the thalamus? Journal of Neurology Clinical Practice. 2014 Nov 19. In Press. **Senior Responsible Author**.
14. Windsor Kwan-Chun Ting; Corinne E. Fischer; Colleen P. Millikin.; Zahinoor Ismail.; Tiffany W. Chow.; Tom A. Schweizer. Grey Matter Atrophy in Mild Cognitive Impairment / Early Alzheimer Disease Associated with Delusions: A Voxel-Based Morphometry Study. Current Alzheimer's Research. 2014 Sep 19. In Press. **Coauthor or Collaborator**.
15. Ismail Z, Malick A, Smith E, Schweizer T, **Fischer C**. Depression versus dementia: is this construct still relevant? Future Medicine: Neurodegenerative Disease Management. 2014 May 12;4(2):119-126. **Coauthor or Collaborator**.
16. Winnie Qian, Tom Schweizer, **Corinne Fischer**. Impact of Socioeconomic Status on Initial Clinical Presentation to a Memory Disorders Clinic. International Psychogeriatrics. 2014 Apr 1. 2014;26(4):597-603. Impact Factor 2.188 (Trainee publication). **Senior Responsible Author**.
17. Peter Egeto, Corinne E Fischer, Zahinoor Ismail, Eric Smith, Tom Schweizer. Lacunar Stroke, Deep White Matter Disease and Depression: A Meta-Analysis. International Psychogeriatrics. 2014 Mar 5. In Press. Impact Factor 2.188. **Coauthor or Collaborator**.

18. Fischer, CE; Sschweizer TA. "How does speaking another language reduce the risk of dementia?". Expert review of neurotherapeutics. 2013 Dec 20. In Press. Impact Factor 2.955. **Principal Author.**
19. Ismail Z, **Fischer C**, McCall V. How is late life depression defined? Psychiatric Clinics of North America. 2013;36(4):475-660. Impact Factor 2.134. **Coauthor or Collaborator.**
20. Jenny Gu, **Corinne Fischer**, Gustavo Saposnik, Tom Schweizer. Profiles of cognitive complaints in vascular mild cognitive impairment and mild cognitive impairment. ISRN Neurology. 2013 Oct 28. PMID:24288623 (Trainee publication). **Coauthor or Collaborator.**
21. Fornazzari L, Ringer T, Ringer L, Fischer CE. Preserved Drawing in a Sculptor with Dementia. Canadian Journal of Neurological Sciences. 2013 Aug 6;40(5):736-737. Impact Factor 1.332. **Coauthor or Collaborator.**
22. Schweizer TA, Li Z, Fischer CE, Alexander M, Smith S, Graham S, and Fornazzari L. From the Thalamus with Love: A Rare Window into the Locus of Emotional Synesthesia. Neurology. 2013 Jul 30;81:509-510. Impact Factor 8.249. **Coauthor or Collaborator.**
23. Fischer CE, Ismail Z, Rapoport MJ. Geriatric Psychiatry or Psychogeriatrics: Partnership at the CAGP/ CCSMH 2012 scientific meeting. Canadian Journal of Geriatrics. 2013;16(1);3--5. **Principal Author.**
24. Ismail Z, Nguyen M, **Fischer C**, Schweizer T, Mulsant B, Mamo D. Neuroimaging of Delusions in Alzheimer's Disease. Psychiatry Research: Neuroimaging. 2012 May 31;202(2):89-95. Impact Factor 3.364. **Coauthor or Collaborator.**
25. Fornazzari L, Ringer L, **Fischer C**, Rigatti M, Schweizer T. "Blue is Music to My Ears": multimodal synesthesias after a thalamic stroke. Neurocase. 2012;18(4):318-22. Impact Factor 1.05. **Coauthor or Collaborator.**
26. **Fischer C**, Ismail Z, Schweizer TA. Delusions increase functional impairment in Alzheimer's disease. Dementia and Geriatric Cognitive Disorders. 2012;33:393-399. Impact Factor 2.787. **Principal Author.**
27. **Fischer C**, Ismail Z, Schweizer TA. Impact of Neuropsychiatric Symptoms on Caregiver Burden in patients with Alzheimer's Disease. Neurodegenerative Disease Management. 2012;2(3):269-277. **Principal Author.**
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46. Ladowsky-Brooks R, **Fischer C**. Ganser Symptoms in a Case of Frontal-Temporal Lobe Dementia:. *Journal of Clinical and Experimental Neuropsychology*. 2003(25);761-68. Impact Factor 1.862. **Senior Responsible Author**.

Case Reports

1. Fornazzari L, Ringer T, Ringer.L, Fischer CE. Preserved Drawing in a Sculptor with Dementia. 2013;40:736-737. Impact Factor 1.332. **Senior Responsible Author**.
2. Schweizer TA, Li Z, Fischer CE, Alexander M, Smith S, Graham S, and Fornazzari L. From the Thalamus with Love: A Rare Window into the Locus of Emotional Synesthesia. 2013;81:509-510. Impact Factor 8.249. **Coauthor or Collaborator**.
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4. **Fischer C**. Experience of Electroconvulsive Therapy in a Case of Glioblastoma Multiforme. 2004;58:96-98. Impact Factor 2.152. **Principal Author**.

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5. Ladowsky-Brooks R, **Fischer C**. Ganser Symptoms in a Case of Frontal-Temporal Lobe Dementia: Is There a Common Neural Substrate? *Journal of Clinical and Experimental Neuropsychology*. 2003(25);761-68. Impact Factor 1.885. **Senior Responsible Author**.

Editorials

1. Fischer CE, Schweizer TA. How does speaking another language reduce the risk of dementia? *Expert Review of Neurotherapeutics*. 2013 Dec 20;14(5):469-471. **Principal Author**.
2. Ismail, Zahinoor; **Fischer, Corinne** Eleanor. "Emerging Concepts in Geriatric Psychiatry: An Update on the Canadian Academy of Geriatric Psychiatry Annual Scientific Meeting". *Canadian Geriatric Journal*. 2013 Dec 10. In Press. **Coauthor or Collaborator**.
3. Fischer CE, Ismail Z, Rapoport MJ. Geriatric Psychiatry or Psychogeriatrics: Partnership at the CAGP/ CCSMH 2012 scientific meeting. *Canadian Journal of Geriatrics*. 2012 Nov 23;16(1):3-5. **Principal Author**.

3. NON-PEER-REVIEWED PUBLICATIONS

Journal Articles

1. Toronto Star. Comment from Dr. Gus Craik, co-author of CORTEX paper, on the impact of bilingualism on brain degeneration, October 13, 2010. **Acknowledged in Publication (Not Author)**.
2. **Fischer C**. A Clinician's Guide to Interpreting Cognitive Measures in Clinical Trials for Alzheimer's Disease. *CPA Bulletin*. June 2002;16-18. **Principal Author**.
3. Norris M, **Fischer C**. Cognitive Enhancers and Alzheimer's Disease - How can we effectively monitor improvement when using cognitive enhancers in patients with Alzheimer's Disease? *The Canadian Journal of CME*. May 2002;33-34. **Coauthor or Collaborator**.

Government Report

1. **Corinne Fischer**, MD FRCP(C) (Principal Investigator), Carole Cohen MD FRCP(C), Anne Stephens RN BScN MEd GNC(C), Joanne Walsh RN MHS, Nancy Read MSc (Applied), Lee Ringer RN MN GNC(c) CPMH(c), Jeffrey Hoch PhD, Sean Rourke PhD, J. P. Cooper MD FRCP(C), Gabriella Golea RN, MN, CPMHN(C), Donald Wasylenki MD FRCP(C). Evaluating the Effectiveness of the Toronto Geriatric Mental Health Outreach Network FINAL RESEARCH REPORT. **Principal Author**.

4. SUBMITTED PUBLICATIONS

Journal Articles

1. Anthony Wan BHSc;1 Gustavo Saposnik MD, MSc;2 Matthew P. Muller MD, PhD;3 Luis Fornazzari MD;4 Tom A. Schweizer PhD;1 Corinne E. Fischer MD4. Global cognitive impairment in a case of disseminated Klebsiella pneumoniae brain abscess. *The Neurologist*. 2015 Aug 27. **Senior Responsible Author**.
2. Mahta Karimpoor, Fred Tam, Stephen Strother, **Corinne Fischer**, Tom Schweizer, Simon Graham. A computerized tablet with visual feedback of hand position for functional magnetic resonance imaging. *Transaction on neural systems and rehabilitation engineering*. 2014 Oct 1. **Coauthor or Collaborator**.
3. Ann Mansur, Dr. Tom A. Schweizer PhD, Dr. Corinne E. Fischer MD FRCP(C), Dr. Luis Fornazzari MD. Always in tune: the unforgettable memory for music in Alzheimer's Disease. *Canadian Journal of Neurological Sciences*. 2014 Jun 3. **Coauthor or Collaborator**.

F. Presentations and Special Lectures

1. INTERNATIONAL

Invited Lectures and Presentations

- 2016 Mar 17 **Chair.** Psychosis and dementia: when two worlds collide. AAGP. Wahsington, District of Columbia, United States. Presenter(s): Dr. **Corinne Fischer**, Dr. Colleen Millikin, Dr. David Munoz, Dr. Robert Sweet. This symposium will review the latest advances in the field of psychosis and dementia, with a focus on epidemiology, clinical features, neuroimaging and neuropathological correlates. We will explore how advances in our understanding of psychosis in dementia has informed our understanding both of neurodegenerative diseases and psychotic disorders. We will also look at the trajectory of psychotic symptoms from the phase of mild cognitive impairment to advanced dementia.
- 2015 May 17 **Invited Speaker.** An update on neurocognitive disorders for the general psychiatrist: Dementia presenting with psychiatric symptoms. APA. Toronto, Ontario, Canada. Presenter(s): Andrea Iaboni, Damien Gallagher, Corinne E Fischer, David Gold. There are many different subtypes of dementia that can present with psychiatric symptoms, although the overlap is much more marked with some disorders in comparison to others. In some instances the overlap may lead to a delay in diagnosis and the application of inappropriate treatments, thus having important implications for patient management. Two relatively common dementia subtypes that may frequently present with a prominent psychiatric presentation are frontal-temporal dementia (FTD) and dementia with lewy bodies (DLB). Patients with FTD typically undergo a marked change in personality in the early stages of the disease, resulting in extreme apathy or conversely impulsivity, disinhibition and socially inappropriate behavior. It may be hard to distinguish these symptoms from other psychiatric disorders such as major depression or bipolar disorder, where you may see similar changes in personality. Important distinguishing features include family history, temporal history (insidious onset) and the co-existence of language impairment. Similarly, patients who have DLB may often present with prominent psychotic symptoms, including delusions and visual hallucinations, early on in the course of the disease. Distinguishing features that should lead to an increased index of suspicion include the presence of a movement disorder (parkinsonism) and fluctuating cognitive symptoms. Patients with more conventional dementia diagnoses, including Alzheimer's Disease (AD) and Vascular Dementia (VD), may occasionally present with psychiatric symptoms at initial presentation, although this is more rare.
- 2015 May 13 **Invited Speaker.** "It takes a village": An unusual case of psychosis in dementia with new research findings. Baycrest Hospital. Toronto, Ontario, Canada. Presenter(s): **Corinne Fischer**. Learning Objectives:
- 1) To present an unusual case of psychosis in dementia
 - 2) To review the existing literature on psychosis and dementia
 - 3) To present new research findings based on analyses of dementia databases (NACC, ADNI).
- 2015 Jan 4 **Invited Speaker.** Psychosis in Alzheimer's disease. Medicalnews.com, kxxv.com, WBHI think tank, medical news today, daily news in health and aging, medicine.net, healthcanal.com, wafb.com, live 5 news.com and 50 more. Toronto, United States. Presenter(s): Dr. **Corinne Fischer**. These sites featured a paper I had written on Alzheimer's disease.
- 2013 Mar 17 **Chair.** Fitting a round peg into a square hole: Understanding psychotic symptoms in Alzheimer's disease. American Association of Geriatric Psychiatry (AAGP). Los Angeles, California, United States. Presenter(s): Fischer CE, Ismail Z, Sweet R. This symposium will provide an overview of psychosis in AD with respect to prevalence, clinical correlates, neurobiological correlates and treatment considerations. Dr. Fischer will discuss the clinical presentation of AD and psychosis. Dr. Sweet will present an overview of the latest neurobiological findings. Dr. Ismail will review common treatment strategies. The ultimate goal of the symposium will be to enhance knowledge and understanding of AD patients with psychosis, thereby improvin.

Presented Abstracts

- 2017 Apr 24** **Presenter.** Neuropathological Basis of the Effect of Apolipoprotein E Genotype on Psychosis in Alzheimer's Disease. American Academy of Neurology. Boston, Massachusetts, USA. We identified 1509 subjects with severe AD. In this group, presence of *APOE4* was associated with the development of psychotic symptoms, both delusions and hallucinations, in a gene dose-related manner, reaching significance for two alleles. This effect is only observed in subjects with comorbid Lewy bodies. Furthermore, the association is gender-specific, being much more pronounced and only reaching significance in females.
- 2016 Apr 17 **Presenter.** Cognitive and Functional Differences Between Delusions and Hallucinations in Alzheimer's Disease. American Academy of Neurology. Vancouver, British Columbia, Canada. Presenter(s): Qian W, Fischer CE, Schweizer TA, Munoz DG. This study looked at clinical differences between AD patients with delusions versus hallucinations in terms of their level of cognitive impairment, functional status, etc. Hallucinations were found to be associated with much worse outcomes.
- 2016 Mar 19 **Presenter.** Vascular risk factors and Subcortical Arteriosclerotic Leukoencephalopathy. American Association of Geriatric Psychiatry. Washington, District of Columbia, United States. Presenter(s): Fischer CE, Qian W*, Schweizer TA, Millikin CP, Ismail Z, Smith EE, Lix LM, Shelton P, Munoz DG. This study looked at neuropathological differences between AD patients with and without psychosis. Strong associations with AD pathology was found only for the clinical subgroup. Both subgroups showed a strong association with cerebrovascular risk factors and vascular pathology.
- 2016 Mar 19 **Presenter.** Delusions in Alzheimer's disease are associated with prefrontal and cerebellar atrophy. American Association of Geriatric Psychiatry. AAGP. Washington, District of Columbia, United States. Presenter(s): Qian W, Fischer CE, Millikin CP, Ismail Z, Smith EE, Lix LM, Munoz DG, Schweizer TA. Functional and structural imaging studies largely suggest right frontal atrophy, but the neuroimaging correlates behind delusions remain inconclusive, as regions from virtually all the lobes have been implicated. Our previous cross-sectional study using data from 58 patients in the Alzheimer's Disease Neuroimaging Initiative (ADNI) database found right fronto-temporal grey matter atrophy in the delusional subset (n=29) compared to non-delusional AD controls (n=29). The current study aimed to continue this investigation by identifying regions of gray matter atrophy in association with delusions in a larger sample of AD patients.
- 2016 Mar 19 **Presenter.** Atrophy in the Default Mode Network following the development of delusions in patients with Alzheimer's disease. AAGP. Washington, District of Columbia, United States. Presenter(s): Qian W, Schweizer TA, Millikin CP, Ismail Z, Smith EE, Lix LM, Munoz DG, Fischer CE. The Default Mode Network (DMN), a resting state network encompassing the ventral and dorsal medial prefrontal cortex (mPFC), posterior cingulate, inferior parietal lobule, medial temporal cortex, hippocampal formation, and the precuneus, has shown abnormal connectivity in normal aging as well as in mental disorders including AD. Disrupted connectivity within the DMN may not be simply a function of disease progression, but may also play a role in the expression of delusions. The current study aimed to identify regions of gray matter atrophy following the development of delusions in patients with AD. We hypothesized that regions of the DMN would show atrophy.
- 2015 Jul 23 **Presenter.** "A Systematic Review and Meta-Analysis for the Prevalence of Depression in Mild Cognitive Impairment". Alzheimer Association International Conference. Washington, District of Columbia, United States. Presenter(s): Ismail Z, Elbayoumi H, Smith EE, **Fischer C**, Schweizer T, Millikin C, Hogan D, Patten S, Fiest K. This was a systematic review of the prevalence of depression in mild cognitive impairment using a meta-analytic approach.
- 2015 May 5 **Presenter.** Neuroplasticity Deficits in the Dorsolateral Prefrontal Cortex of Individuals with Alzheimer's Disease. Society of Biological Psychiatry Annual Meeting (Toronto). Toronto, Ontario, Canada. Presenter(s): Sanjeev Kumar, Reza Zomorodi, Daniel M. Blumberger, **Corinne Fischer**, Zafiris J. Daskalakis, Benoit H. Mulsant, Sanjeev Kumar, Reza Zomorodi, Daniel M. Blumberger, Corinne Fischer, Zafiris J. Daskalakis, Benoit H. Mulsant, Bruce G. Pollock, Tarek K. Rajji. Available from: 1.

- 2015 Mar 28 **Presenter.** FDG-PET correlates of delusions in AD patients using the ADNI database. AAGP. New Orleans, Louisiana, United States. Presenter(s): Zahinoor Ismail¹, Colleen Millikin², Corinne Fischer³, Tom A. Schweizer³, Tiffany W. Chow⁴. Our study used Fluorodeoxyglucose Positron Emission Tomography (FDG-PET) data from the Alzheimer's Disease Neuroimaging Initiative (ADNI) to examine changes in brain function associated with the development of delusions in patients with Alzheimer's Disease (AD).
- 2014 Jul 15 **Presenter.** Design of the SARTAN-AD Trial: A Randomized, Open Label, Proof of Concept Study of Telmisartan vs. Perindopril in Hypertensive Mild-Moderate Alzheimer's Disease Patients. AAIC. Copenhagen, Denmark. Presenter(s): Black SE, Lanctot KL, Zotovic L, Oh P, Masellis M, Greenberg B, Borrie M, Cohen S(?), **Fischer C**, Frank A(?), Garcia A, Goldlist B, Ingram J, Kumar S, Marotta G, Pollock B, Tang-Wai D(?), Verhoeff P. To determine the comparative efficacy of Sartan in mild/moderate AD.
- 2014 May 2 **Presenter.** Art, Cognitive Reserve Capacity and Alzheimer's Disease. Alzheimer's Disease International. San Jaun, Puerto Rico, United States. Presenter(s): L. Fornazzari, D. Attala, **C. Fischer**, T. Schweizer, E. Dudzic, J. Barfett. Artistic group showed larger rTWH than controls, revealing greater hippocampal atrophy, with similar cognitive impairment. Functional data also support these findings. We are suggesting that art may be an enhancer of BRC.
- 2014 May 2 **Presenter.** Always in Tune: The unforgettable memory for music in Alzheimer's disease. Alzheimer's Disease International. San Jaun, Puerto Rico, United States. Presenter(s): L. Fornazzari, A. Mansur, **C. Fischer**, T. Schweizer. This study on amateur piano players suggests that the artistic and other cognitive abilities are differentially impacted by AD . Exposure to music training and performance at an amateur level can preserve memory involved in musical expression, and these maybe more resistant to the effect of the disease.
- 2014 Mar 15 **Presenter.** Factors Associated with Development and Stability of Delusions in Probable Alzheimer's Disease. AAGP. Orlando, Florida, United States. Presenter(s): Millikin C, Stoesz BM, Fischer CE, Ismail Z, Schweizer TA. We compared factors associated with delusion development between 318 patients who developed delusions after baseline (D+) and 1,394 patients who never developed delusions (D-).
- 2014 Mar 15 **Presenter.** Factors associated with the development and stability of delusions in probable Alzheimer's disease. AAGP. Miami, Florida, United States. Presenter(s): Millikin, C., Stoesz, B., Ismail, Z., **Fischer, C.**, & Schweizer, T. The objective of the present study was to examine factors associated with delusion development and stability. Specifically, we hypothesized that: (1) development of delusions would be associated with earlier age at onset of cognitive decline, non-Caucasian ethnicity, and increased depressive symptoms; (2) stability of delusions over time would be associated with more severe cognitive impairment; and (3) fluctuating delusions may be related to cerebrovascular risk factors.
- 2012 Mar 27 Neuropsychiatric symptoms over 3 years and conversion to dementia in amnesic mild cognitive impairment. Baycrest Annual Conference on Cognitive Neuroscience. Presenter(s): Millikin CP, Fischer CE, Schweizer TA, Milgrom C.
- 2011 Mar 28 **Presenter.** Delusions, Behavioural Symptoms, Quality of Life and Caregiver Burden in Alzheimer's. 26th International Conference of Alzheimer's Disease International. Toronto, Ontario, Canada. Presenter(s): Fischer CE, Forrest L, Ismail Z, Schweizer TA.
- 2011 Mar 21 **Presenter.** Delusions, Frontal Lobe and Real World Functioning in Alzheimer's. AAGP 2011 Annual Meeting. San Antonio, Texas, United States. Presenter(s): Fischer CE, Forrest L, Ismail Z, Schweizer TA.
- 2011 Feb Mild Cognitive Impairment and Self-Identified Problems in Everyday Life. 39th Annual Meeting of the International Neuropsychological Society. Boston, Massachusetts, United States. Presenter(s): Dawson D, Churchill K. **Fischer C**, Stuss DT, Winocur G, Joy J, Schweizer TA.
- 2009 Sep **Presenter.** Determining the Impact of Medical Co-morbidity on Subjective and Objective Cognitive Performance in a Sample of Inner City elderly. 14th International Congress of the International Psychogeriatric Association. Montreal, Quebec, Canada. Presenter(s): Fischer CE, Yeung E, Depeng J,

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Fortin CM, Fornazzari L, Ringer L, Schweizer TA. September 1-3, 2009.

- 2009 Sep **Presenter.** Determining the Impact of Socioeconomic Status on the Prevalence of Dementia in an Inner City Memory Disorders Clinic. 14th International Congress of the International Psychogeriatric Association. Montreal, Quebec, Canada. Presenter(s): Fischer CE, Yeung E, Hansen T, Gibbons S, Glazier R, Fornazzari L, Ringer L, Schweizer TA. September 1-3, 2009.
- 2007 Mar **Presenter.** Neurocognitive Profiles of Older Adults with and without Major Depression. AAGP 2007 Annual Meeting. New Orleans, Louisiana, United States. Presenter(s): **Fischer C**, Atkins JH, Bozanovic R, Norris M, Herrmann N, Nisenbaum R, Rourke SB. March 2-5, 2007.
- 2006 May 24 **Presenter.** The Impact of Depression on the Accuracy of Subjective Memory Complaints in Geriatric Patients. APA 2006 Annual Meeting - New Research Abstracts. Toronto, Ontario, Canada. Presenter(s): **Fischer C**, Atkins JH, Bozonovic R, Norris M, Rourke SB.
- 2005 Jun Ontario's Geriatric Emergency Management (GEM) Program: A Novel Interdisciplinary Model of Emergency Care for Seniors. International Interdisciplinary Conference on Emergencies. Montreal, Quebec, Canada. Presenter(s): Stephens A, **Fischer C**, Dawe I.
- 2005 Ontario's Geriatric Emergency Management (GEM) Program: A Novel Interdisciplinary Model of Emergency Care for Seniors. International Interdisciplinary Conference on Emergencies program guide. Stephens A, **Fischer C** (co-author), Dawe I.
- 2003 Aug **Presenter.** Neuropsychological Determinants of Delusions in Alzheimer's Disease. American Psychological Association Annual Meeting. Toronto, Ontario, Canada. Presenter(s): **Fischer C**, Ladowsky-Brooks R, Millikin C, Norris M, Hansen K, Rourke SB.
- 2003 Neuropsychological Determinants of Delusions in Alzheimer's Disease. American Psychological Association annual meeting program guide. **Fischer C** (principal author), Ladowsky-Brooks R, Millikin C, Norris M, Hansen K, Rourke SB.

Presented and Published Abstracts

2017 July 16th Presenter Kim J, Qian W, **Fischer CE**, Schweizer TA, Munoz DG. *APOE ε4 Promotes Psychosis in Female Alzheimer's Disease Patients in Association with Lewy Bodies.* Alzheimer's Association International Conference, July 16-20, 2017, London, England. The present study investigated the association between *APOE ε4* allele and psychosis, and the role of LB pathology in a large sample of neuropathologically confirmed cases of AD.

2017 July 16th. Presenter. Winnie Qian, HBS1,2, Julia Kim, HBS1,3, Tom A Schweizer, PhD1,2, **Corinne E Fischer**, MD, FRCPC1,2,4 and David G Munoz, MD, FRCPC1,2. Differential Interaction of Apoe ε4 and Psychosis Phenotypes on Cognitive Performance in Alzheimer's Disease. Alzheimer's Association International Conference, July 16-20, 2017, London, England. The current study investigated the relationship between *APOEε4* and psychosis on cognitive and functional performance in a large sample of neuropathologically confirmed AD patients.

2017 July 16th. Presenter. Hird MA, Churchill NW, Lenehan SL, Fischer CE, Naglie G, Graham SJ, Schweizer TA. **Investigating functional brain connectivity in patients with mild cognitive impairment during a cognitively complex car-following task.** This study combined driving simulation and functional magnetic resonance imaging (fMRI), to investigate functional brain connectivity in individuals with MCI while performing a car-following task.

2017 March 25 Presenter. **Relationship between APOE ε4 and cognitive and functional outcomes in Alzheimer's disease patients with psychosis.** **American Association of Geriatric Psychiatry Annual Meeting, Dallas, Texas.** **Presenter(s): Winnie Qian, Tom Schweizer, Corinne Fischer, David Munoz.** The current study aimed to investigate the relationship between psychosis status and cognitive and functional outcomes in neuropathologically confirmed cases of AD, and how the relationship may be affected by APOE genotype.

2017 March 25 **Presenter.** Delusion in Alzheimer's Disease is Associated with Decreased Default Mode Network Connectivity. **American Association of Geriatric Psychiatry Annual Meeting, Dallas, Texas.** **Presenter(s):**

Winnie Qian, Tom Schweizer, Corinne Fischer, David Munoz. Building on our previous finding, we aimed to investigate the functional resting-state differences between AD patients with and without delusions, as well as in a subset of patients with schizophrenia, a disorder characterized by psychosis. We hypothesized that delusions, in both the AD and schizophrenia groups, are associated with decreased DMN activation compared to non-delusional group.

2017 March 25 Presenter. **Determining the Impact of Psychosis on Rates of False Positive and False Negative Diagnosis in Alzheimer's Disease, American Association of Geriatric Psychiatry Annual Meeting, Dallas, Texas.**
Presenter(s): Winnie Qian, Tom Schweizer, Corinne Fischer, David Munoz. In the current study we examined how rates of clinical misdiagnosis in AD is affected by the presence of psychosis, divided into delusions and hallucinations. We hypothesized that patients with psychosis will have a higher rate of misdiagnosis than patients without psychosis, given the symptom overlap with other dementias.

2016 Jul 26 **Presenter.** Misdiagnosis of Alzheimer's disease: Inconsistencies between clinical diagnosis and neuropathological confirmation. Alzheimer Association International Congress. Toronto, Ontario, Canada.
Presenter(s): Winnie Qian, Tom A. Schweizer, David G. Munoz, Corinne E. Fischer. Despite consensus on clinical diagnostic criteria, some patients with Alzheimer's disease(AD) may be misdiagnosed as other forms of dementia, and conversely, other dementias may be misdiagnosed as AD. Misdiagnosis is a roadblock in clinical management because different dementia types require different treatment approaches. Moreover, clinical misdiagnosis impedes the ability to find new treatments in clinical trials because inclusion of incorrectly diagnosed patient groups can dilute or obscure important effects. The current study aimed to investigate inconsistencies between clinical and neuropathological diagnoses in AD.

Publication Details:

Winnie Qian, Tom A. Schweizer, David G. Munoz, Corinne E. Fischer. Misdiagnosis of Alzheimer's disease: Inconsistencies between clinical diagnosis and neuropathological confirmation. Alzheimer's disease and associated disorders. **Senior Responsible Author.**

2016 Jul 26 **Presenter.** Impact of Hypertension on Delusions in Patients with Severe Alzheimer's disease. AAIC. Toronto, Ontario, Canada. **Presenter(s):** Julia Kim, CE Fischer, TA Schweizer, DG Munoz. Expression of Alzheimer's disease (AD) is modulated by vascular risk factors (vrf). Studies have shown that vrf affect cognitive function during the early stages of AD. In addition, vascular pathology, thought to be caused by vrf, is also associated with cognitive decline. The aim of our study is to investigate the relationship between hypertension, cognitive function and psychosis in patients with severe AD, and whether the mechanism is mediated through vascular pathology.

Publication Details:

Impact of Hypertension on Delusions in Patients with Severe Alzheimer's disease. Alzheimer's disease and associated disorders. **Coauthor or Collaborator.**

2016 Jul 26 **Presenter.** Investigating driving errors and the brain activation patterns of patients with mild cognitive impairment during routine and complex driving conditions. AAIC. Toronto, Ontario, Canada. **Presenter(s):** Hird MA, Vesely KA, Churchill NW, Fischer CE, Naglie G, Graham SJ, Schweizer TA. Mild cognitive impairment (MCI) can affect multiple cognitive abilities that are essential for driving, including attention, memory, executive functioning, and visuospatial ability. Safe driving requires the coordination of all of these domains and corresponding brain regions. However, the areas and degree of driving impairment characteristic of individuals with MCI remain unknown. As a result, there are no valid tools to help healthcare professionals assess the driving fitness of patients with MCI. This is the first study to combine driving simulation and functional magnetic resonance imaging (fMRI) to isolate the driving errors and corresponding brain activation patterns of individuals with MCI while performing driving tasks of increasing complexity.

Publication Details:

Investigating driving errors and the brain activation patterns of patients with mild cognitive impairment during routine and complex driving conditions. Alzheimer's disease and associated disorders. **Coauthor or Collaborator.**

2016 Jul 26 **Presenter.** Behavioural Neurology Assessment – Revised:Validation in Amnesic MCI. AAIC. Toronto,

Ontario, Canada. Presenter(s): Morris Freedman, Larry Leach, Kathryn Stokes, Yael Goldberg, Mohammad O. AlHaj, Barry Greenberg, Michael Borrie, Jennifer Fogarty, **Corinne Fischer**, Nathan Herrmann, Ron Keren, Sanjeev Kumar, Suvendrini Lena, Gary Naglie, Tareq Rajji, William Reichman, Maria Carmela Tartaglia, Paul Verhoeff, Uri Wolf, Sandra E. Black, David F. Tang-Wai. The Behavioural Neurology Assessment-Revised (BNA-R) is an in-depth cognitive tool that is intermediate between short screening tests and lengthy neuropsychological assessments. It provides a relatively quick and reliable assessment of seven cognitive domains: orientation, immediate verbal recall, delayed verbal and visual recall, delayed verbal and visual recognition, visuospatial function, working memory/attention/executive control, and language. Our objective was to validate the BNA-R for diagnosis of aMCI.

Publication Details:

Morris Freedman, Larry Leach, Kathryn Stokes, Yael Goldberg, Mohammad O. AlHaj, Barry Greenberg, Michael Borrie, Jennifer Fogarty, **Corinne Fischer**, Nathan Herrmann, Ron Keren, Sanjeev Kumar, Suvendrini Lena, Gary Naglie, Tareq Rajji, William Reichman, Maria Carmela Tartaglia, Paul Verhoeff, Uri Wolf, Sandra E. Black, David F. Tang-Wai. Behavioural Neurology Assessment – Revised: Validation in Amnesic MCI, Alzheimer’s disease and associated disorders.

2016 Mar 20 **Presenter.** Delusions in Alzheimer’s disease are associated with prefrontal and cerebellar atrophy. American Association of Geriatric Psychiatry. Washington, District of Columbia, United States. Presenter(s): Qian W, Fischer CE, Millikin CP, Ismail Z, Smith EE, Lix LM, Munoz DG, Schweizer TA. Functional and structural imaging studies largely suggest right frontal atrophy, but the neuroimaging correlates behind delusions remain inconclusive, as regions from virtually all the lobes have been implicated. Our previous cross-sectional study using data from 58 patients in the Alzheimer’s Disease Neuroimaging Initiative (ADNI) database found right fronto-temporal grey matter atrophy in the delusional subset (n=29) compared to non-delusional AD controls (n=29). The current study aimed to continue this investigation by identifying regions of gray matter atrophy in association with delusions in a larger sample of AD patients.

Publication Details:

Qian W, Fischer CE, Millikin CP, Ismail Z, Smith EE, Lix LM, Munoz DG, Schweizer TA. Delusions in Alzheimer’s disease are associated with prefrontal and cerebellar atrophy. American Journal of Geriatric Psychiatry.

2016 Mar 19 **Presenter.** Atrophy in the Default Mode Network following the development of delusions in patients with Alzheimer’s disease. American Association of Geriatric Psychiatry. Washington, District of Columbia, United States. Presenter(s): Qian W, Schweizer TA, Millikin CP, Ismail Z, Smith EE, Lix LM, Munoz DG, Fischer CE. . The Default Mode Network (DMN), a resting state network encompassing the ventral and dorsal medial prefrontal cortex (mPFC), posterior cingulate, inferior parietal lobule, medial temporal cortex, hippocampal formation, and the precuneus, has shown abnormal connectivity in normal aging as well as in mental disorders including AD. Disrupted connectivity within the DMN may not be simply a function of disease progression, but may also play a role in the expression of delusions. The current study aimed to identify regions of gray matter atrophy following the development of delusions in patients with AD. We hypothesized that regions of the DMN would show atrophy.

Publication Details:

Qian W, Schweizer TA, Millikin CP, Ismail Z, Smith EE, Lix LM, Munoz DG, Fischer CE. Atrophy in the Default Mode Network following the development of delusions in patients with Alzheimer’s disease. American Journal of Geriatric Psychiatry.

2016 Mar 19 **Presenter.** Vascular risk factors and Subcortical Arteriosclerotic Leukoencephalopathy, but not Alzheimer lesion load, are associated with development of psychosis in Alzheimer’s disease. AAGP. Washington, District of Columbia, United States. Presenter(s): Corinne E. Fischer^{1,2}, MD; Winnie Qian¹, HBSc; Tom A. Schweizer^{1,3,4,5,6}, PhD; Colleen Millikin⁷, PhD; Zahinoor Ismail⁸, MD; Eric E. Smith⁸, MD MPH; Lisa M. Lix⁹, PhD; Paul Shelton¹⁰, MD; David G. Munoz^{1,11,12}, MD. We assessed the relationship between psychosis and various clinical variables, neuropathologic correlates, and vascular risk factors in patients with AD. All data was obtained from the National Alzheimer’s Coordinating Center (NACC) database. Our sample consisted of 1) 890 clinically diagnosed AD (cAD) patients with neuropathology data and 2) 728

neuropathologically confirmed AD (npAD) patients based on the CERAD "definite" AD with any clinical diagnosis. The two groups overlapped, but each was reviewed separately. The presence of delusions and hallucinations were identified by the delusional and hallucinatory subscores of the NPI-Q, respectively.

Publication Details:

Colleen Millikin⁷, PhD; Zahinoor Ismail⁸, MD; Eric E. Smith⁸, MD MPH; Lisa M. Lix⁹, PhD; Paul Shelton¹⁰, MD; David G. Munoz^{1,11,12}, MD. Vascular risk factors and Subcortical Arteriosclerotic Leukoencephalopathy, but not Alzheimer lesion load, are associated with development of psychosis in Alzheimer's disease. American Journal of Geriatric Psychiatry. 2016 Mar 19. **Principal Author.**

Presenter. Dorsolateral Prefrontal Cortex Neuroplasticity and Working Memory Performance in Individuals with Early Alzheimer's Disease. Annual Meeting of International College of Geriatric Neuropsychopharmacology (Palo Alto, USA) on 10/8/2015. Palo Alto, California, United States. Presenter(s): Sanjeev Kumar, Reza Zomorodi, Daniel M. Blumberger, **Corinne Fischer**, Zafiris J. Daskalakis, Benoit H. Mulsant, Bruce G. Pollock, Tarek K. Rajji.

Publication Details:

Sanjeev Kumar, Reza Zomorodi, Daniel M. Blumberger, **Corinne Fischer**, Zafiris J. Daskalakis, Benoit H. Mulsant, Bruce G. Pollock, Tarek K. Rajji. Dorsolateral Prefrontal Cortex Neuroplasticity and Working Memory Performance in Individuals with Early Alzheimer's Disease. 2015 Oct 8. **Coauthor or Collaborator.**

Media Appearances

- 2016 Jan 5 **Invited Speaker.** Alzheimer's disease and psychosis. Interviewer: Imogen. South West News, South West News. London, United Kingdom. Presenter(s): Dr. **Corinne Fischer**. This interview profiled a paper I wrote on psychosis in AD.
- 2016 Jan 4 **Invited Speaker.** Alzheimer's disease and psychosis. Interviewer: Jacqueline Oberst. Provider magazine, Provider magazine. Washington, District of Columbia, United States. Presenter(s): Dr. **Corinne Fischer**. The article profiled an article I wrote on psychosis in Alzheimer's disease.

2. NATIONAL

Invited Lectures and Presentations

- 2016 Mar 5 **Invited Lecturer.** Anxiety and Depression in the Elderly. Care of the Elderly Course. Toronto, Ontario, Canada. Presenter(s): Dr. **Corinne Fischer**. This lecture provided an overview of depression and anxiety in the elderly.
- 2015 Feb 8 **Chair.** Care of the Elderly Course. University Health Network. Toronto, Ontario, Canada. Presenter(s): **Corinne Fischer**. This lecture provides and overview of depression and anxiety in the elderly for family doctors.
- 2014 Sep 12 **Presenter.** Dementia presenting with psychiatric symptoms. CPA. Toronto, Ontario, Canada. Presenter(s): Damien Gallagher, **Corinne Fischer**, Andrea Iaboni. There are many different subtypes of dementia that can present with psychiatric symptoms, although the overlap is much more marked with some disorders in comparison to others. In some instances the overlap may lead to a delay in diagnosis and the application of inappropriate treatments, thus having important implications for patient management. (Trainee Presentation).
- 2014 Sep 10 **Chair.** Psychosis in the elderly: What's new? CAGP. Toronto, Ontario, Canada. Presenter(s): Corinne E Fischer, Zahinoor Ismail, Tarek Rajji. This symposium will review the epidemiology and clinical presentation of psychotic disorders in the elderly, including dementia with psychosis and late onset psychotic disorders. In addition, we will review the neurobiology of these symptoms and discuss

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treatment approaches. (Trainee Presentation).

- 2014 May 23 **Presenter.** Psychosis and Alzheimer's Disease: New Research Directions. Baycrest Hospital. Toronto, Canada. Presenter(s): **Corinne Fischer**. These rounds provided an update on psychosis in Alzheimer's disease.
- 2014 Mar 29 **Invited Lecturer.** Geriatric Depression and Anxiety in the Family Practice Setting. University of Toronto Family Practice. Toronto, Ontario, Canada. Presenter(s): **Corinne Fischer**. An overview of depression and anxiety in the elderly.
- 2013 Apr 6 **Invited Lecturer.** Anxiety and Depression in the Elderly. Department of Family Medicine, University of Toronto. Toronto, Ontario, Canada. Presenter(s): **Corinne Fischer**. This lecture was delivered as part of the care of the elderly course. It provided an overview of anxiety and depression in the elderly.
- 2012 Nov 19 **Invited Lecturer.** A spotlight on aging: caring for Canada's changing population. We care home health services. Toronto, Ontario, Canada. Presenter(s): Corinne E Fischer, Gale M Carey, Nadine Henningsen. Geriatrics round table to discuss recent trends in aging and dementia.
- 2012 Sep 21 **Presenter.** Psychotic symptoms in Alzheimer's disease: emerging concepts. Canadian Academy of Geriatric Psychiatry Annual Meeting. Presenter(s): **Corinne Fischer**, Zahinoor Ismail, Benoit Mulsant.
- 2012 Mar 31 **Invited Lecturer.** Overview of anxiety and depression in the elderly. Department of family practice, university of Toronto. Toronto, Ontario, Canada. Presenter(s): Dr. **Corinne Fischer**. Part of the care of the elderly course. This course provided an overview of anxiety and depression in the elderly.
- 2011 Mar 25 **Invited Lecturer.** Anxiety and Depression in the Elderly. University of Toronto family practice department. Toronto, Ontario, Canada. Presenter(s): **Corinne Fischer**. This lecture was delivered as part of the care of the elderly course. It provided an overview of anxiety and depression to family doctors.

Presented Abstracts

- 2014 Oct 22 **Presenter.** A systematic review and meta-analysis of the prevalence of depression and depressive symptoms in Mild Cognitive Impairment. Canadian Mental Health Association. Calgary, Alberta, Canada. Presenter(s): Ismail Z, Elbayoumi H, **Fischer C**, Hogan D, Millikin C, Schweizer T, Smith E, Patten S, Fiest K. This poster provides an overview of the prevalence of depressive symptoms in patients with mild cognitive impairment.
- 2013 Oct 4 **Presenter.** Impact of socioeconomic status on initial clinical presentation to a memory disorders clinic. 7th Canadian Conference on Dementia. Vancouver, British Columbia, Canada. Presenter(s): Qian, W., Schweizer T, Fischer CE.
- 2013 Oct 4 **Presenter.** Brain disease and creativity: The cases of Franz Schubert and Maurice Ravel. 7th Canadian Conference on Dementia. Vancouver, British Columbia, Canada. Presenter(s): Mansur, A., **Fischer, C.**, Schweizer, T., Fornazzari, L.
- 2013 Oct 4 **Presenter.** Alzheimer's and the effect of artistic occupations on cognitive reserve. 7th Canadian Conference on Dementia. Vancouver, British Columbia, Canada. Presenter(s): Attalla, D., Fornazzari, L., Schweizer, T., **Fischer, C.**
- 2013 Oct 4 **Presenter.** Asymmetric right frontal grey matter atrophy in delusional mild cognitive impairment patients. 7th Canadian Conference on Dementia. Vancouver, British Columbia, Canada. Presenter(s): Ting WKC, Fischer CE, Millikin C, Ismail Z, Schweizer TA.
- 2013 Oct 4 **Presenter.** Risk factors for the development of psychotic symptoms in early stage Alzheimer's disease. 7th Canadian Conference on Dementia. Vancouver, British Columbia, Canada. Presenter(s): Millikin, C., Turnbull, D., Lix, L, & **Fischer, C.**
- 2013 Oct 4 **Presenter.** Music faculties preserved in musicians with Alzheimer's Disease. 7th Canadian Conference on Dementia. Vancouver, British Columbia, Canada. Presenter(s): Mansur, A., **Fischer, C.**, Schweizer, T., Acuna, K., Kirwan N., Shi, J., Fornazzari, L.

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- 2011 Oct 29 Profile of Subjective Cognitive Complaints in MCI and VaMCI patients. 6th Annual Canadian Conference on Dementia. Montreal, Quebec, Canada. Presenter(s): Gu J, Fischer CE, Schweizer TA.
- 2010 Sep 22 Psychotropic Medication Utilization in Long Term Care Patients Referred for Specialized Psychogeriatric Consultation. CAGP abstract guide. **Fischer C** (principal author), Rigatti M, Forrest L, Schweizer TA.
- 2010 Sep 22 **Presenter.** Psychotropic Medication Utilization in Long Term Care Patients Referred for Specialized Psychogeriatric Consultation. Canadian Association of Geriatric Psychiatry Annual Meeting. Toronto, Ontario, Canada. Presenter(s): **Fischer C**, Rigatti M, Forrest L, Schweizer TA.
- 2009 Oct The Influence of Diabetes and Socioeconomic Status on Global Cognitive Function. 5th Annual Canadian Conference on Dementia. Toronto, Ontario, Canada. Presenter(s): Sham R, Schweizer TA, Fischer CE. October 1-2, 2009.
- 2009 Oct Impact of SES on Cognitive Response to Cholinesterase Inhibitors in Alzheimer's Disease. 5th Annual Canadian Conference on Dementia. Toronto, Ontario, Canada. Presenter(s): Yeung E, Joy J, Sham R, Schweizer TA, Fischer CE. October 1-2, 2009.
- 2009 Oct **Presenter.** Determining the Impact of Dementia on Antidepressant Treatment Response in Older Persons. 5th Annual Canadian Conference on Dementia. Toronto, Ontario, Canada. Presenter(s): **Fischer C**, Ringer L, Joy J, Sham R, Hansen K, Nisenbaum R, Atkins J, Rourke SB, SchweizerTA, Herrmann N. October 1-2, 2009.
- 2007 Oct **Presenter.** Neurocognitive Profiles of Older Adults with and without Major Depression. 4th Annual Canadian Colloquium on Dementia. Vancouver, British Columbia, Canada. Presenter(s): **Fischer C**, Atkins JH, Bozanovic R, Norris M, Herrmann N, Nisenbaum R, Rourke SB. October 18-19, 2007.
- 2007 Oct **Presenter.** The Impact of Depression on the Accuracy of Subjective Memory Complaints in Geriatric Patients. 4th Annual Canadian Colloquium on Dementia. Vancouver, British Columbia, Canada. Presenter(s): **Fischer C**, Atkins JH, Bozanovic R, Norris M, Rourke SB. October 18-19, 2007.
- 2005 Oct **Presenter.** The Clinical Relevance of Subjective Memory Complaints in Older Persons. 3rd Annual Canadian Colloquium on Dementia. Ottawa, Ontario, Canada. Presenter(s): **Fischer C**, Millikin C, Bozanovic R, Norris M, Rourke SB.
- 2003 Oct St. Michael's Hospital Memory Disorders Clinic: Qualitative Retrospective Chart Review. 2nd Annual Canadian Colloquium on Dementia. Montreal, Quebec, Canada. Presenter(s): Norris M, **Fischer C**, Bozanovic R, Millikin C, Rourke SB.
- 2003 Oct **Presenter.** Neuropsychological Determinants of Delusions in Alzheimer's Disease. 2nd Annual Canadian Colloquium on Dementia. Montreal, Quebec, Canada. Presenter(s): **Fischer C**, Ladowsky-Brooks R, Millikin C, Norris M, Hansen K, Rourke SB.

Presented and Published Abstracts

- 2015 Oct 2 **Presenter.** Is Development of Psychosis a Risk Factor for Attrition in Longitudinal Studies of Dementia? Canadian Conference on Dementia. Toronto, Ontario, Canada. Presenter(s): Colleen Millikin, Zahinoor Ismail, **Corinne Fischer**. Attrition/dropout is a challenging issue for longitudinal studies of dementia. To date, several risk factors for attrition have been identified among participants in longitudinal dementia studies, including baseline cognitive status, white matter lesion volume, depression, nonspouse caregiver, and caregiver burden. Development of psychotic symptoms (delusions and/or hallucinations) is associated with many negative outcomes for patients with dementia, such as more rapid cognitive and functional decline, increased caregiver stress, and earlier institutionalization. The present study sought to evaluate whether participants with Alzheimer's disease (AD) at baseline who develop psychosis have fewer study visits and less neuroimaging data compared to those who do not develop psychotic symptoms.

Publication Details:

Is Development of Psychosis a Risk Factor for Attrition in Longitudinal Studies of Dementia? Canadian

Journal of Geriatrics. 2015 Oct 2. **Coauthor or Collaborator.**

2015 Oct 2 **Presenter.** Design of the SARTAN-AD Trial: A Randomized, Open Label, Proof of Concept Study of Telmisartan vs. Perindopril in Hypertensive Mild-Moderate Alzheimer's Disease Patients. Canadian Conference on Dementia. Ottawa, Ontario, Canada. Presenter(s): Zotovic L, Lanctot KL, Oh P, Borrie M, **Fischer C**, Freedman M, Greenberg BD, Heckman G, Hsiung R, Kumar S, Lee L, Marotta G, Masellis M, Pollock B, Sahlas DJ, Smith E, Verhoeff NPLG, Black SE. To conduct a proof-of-concept study comparing the efficacy and safety of an ACEI (perindopril) vs. a sartan (telmisartan) in reducing progression of brain atrophy (indexed by ventricular volume expansion on 3T MRI at 12 months), in hypertensive AD patients. Both drugs demonstrate equal cardiovascular protection and blood pressure control and are thought to be best in their class for CNS effects. 2) To compare treatment responsiveness of other cognitive (e.g. ADAS-Cog), neurobehavioural (e.g. NPI), functional and caregiver burden measures and multi-modal MRI measures.

Publication Details:

Zotovic L, Lanctot KL, Oh P, Borrie M, **Fischer C**, Freedman M, Greenberg BD, Heckman G, Hsiung R, Kumar S, Lee L, Marotta G, Masellis M, Pollock B, Sahlas DJ, Smith E, Verhoeff NPLG, Black SE. Design of the SARTAN-AD Trial: A Randomized, Open Label, Proof of Concept Study of Telmisartan vs. Perindopril in Hypertensive Mild-Moderate Alzheimer's Disease Patients. Canadian Journal of Geriatrics. 2015 Oct 2. **Coauthor or Collaborator.**

2015 Oct 2 **Presenter.** Investigating risky driving and turning errors in patients with amnesic and multiple-domain mild cognitive impairment. Canadian Conference on Dementia. Toronto, Ontario, Canada. Presenter(s): Hird MA, Vesely KA, Fischer CE, Naglie G, & Schweizer TA. Given the heterogeneous presentation of MCI, this study aimed to investigate the driving performance of patients with amnesic MCI (aMCI) and multiple-domain MCI (mdMCI). It was hypothesized that MCI patients would exhibit increased risky driving errors (i.e. collisions, centreline crossings, road edge excursions) compared to healthy controls and that patients with mdMCI would exhibit greater driving impairment.

Publication Details:

Investigating risky driving and turning errors in patients with amnesic and multiple-domain mild cognitive impairment. Canadian Geriatrics Journal. 2015 Oct 2. **Coauthor or Collaborator.**

2015 Oct 2 **Presenter.** Vascular risk factors and Subcortical Arteriosclerotic Leukoencephalopathy, but not Alzheimer lesion load, are associated with development of psychosis in Alzheimer's disease. Canadian Conference on Dementia. Toronto, Ontario, Canada. Presenter(s): Corinne E. Fischer^{1,2}, MD; Winnie Qian¹, HBSc; Tom A. Schweizer^{1,3,4,5,6}, PhD; Colleen Millikin⁷, PhD; Zahinoor Ismail⁸, MD; Eric E. Smith⁸, MD MPH; Lisa M. Lix⁹, PhD; Paul Shelton¹⁰, MD; David G. Munoz^{1,11,12}, MD. We assessed the relationship between psychosis and various clinical variables, neuropathologic correlates, and vascular risk factors in patients with AD. All data was obtained from the National Alzheimer's Coordinating Center (NACC) database. Our sample consisted of 1) 890 clinically diagnosed AD (cAD) patients with neuropathology data and 2) 728 neuropathologically confirmed AD (npAD) patients based on the CERAD "definite" AD with any clinical diagnosis. The two groups overlapped, but each was reviewed separately. The presence of delusions and hallucinations were identified by the delusional and hallucinatory subscores of the NPI-Q, respectively.

Publication Details:

Corinne E. Fischer^{1,2}, MD; Winnie Qian¹, HBSc; Tom A. Schweizer^{1,3,4,5,6}, PhD; Colleen Millikin⁷, PhD; Zahinoor Ismail⁸, MD; Eric E. Smith⁸, MD MPH; Lisa M. Lix⁹, PhD; Paul Shelton¹⁰, MD; David G. Munoz^{1,11,12}, MD. Vascular risk factors and Subcortical Arteriosclerotic Leukoencephalopathy, but not Alzheimer lesion load, are associated with development of psychosis in Alzheimer's disease. Canadian Geriatrics Journal. 2015 Oct 2. **Coauthor or Collaborator.**

2015 Oct 2 **Presenter.** Delusions in Alzheimer's disease are associated with prefrontal and cerebellar atrophy. Canadian Conference on Dementia. Ottawa, Ontario, Canada. Presenter(s): Corinne E. Fischer^{1,2}, MD; Winnie Qian¹, HBSc; Tom A. Schweizer^{1,3,4,5,6}, PhD; Colleen Millikin⁷, PhD; Zahinoor Ismail⁸, MD; Eric E. Smith⁸, MD MPH; Lisa M. Lix⁹, PhD; Paul Shelton¹⁰, MD; David G. Munoz^{1,11,12}, MD. Functional and structural imaging studies largely suggest right frontal atrophy, but the neuroimaging correlates

behind delusions remain inconclusive, as regions from virtually all the lobes have been implicated. Our previous cross-sectional study using data from 58 patients in the Alzheimer's Disease Neuroimaging Initiative (ADNI) database found right fronto-temporal grey matter atrophy in the delusional subset (n=29) compared to non-delusional AD controls (n=29). The current study aimed to continue this investigation by identifying regions of gray matter atrophy in association with delusions in a larger sample of AD patients.

Publication Details:

Corinne E. Fischer^{1,2}, MD; Winnie Qian¹, HBSc; Tom A. Schweizer^{1,3,4,5,6}, PhD; Colleen Millikin⁷, PhD; Zahinoor Ismail⁸, MD; Eric E. Smith⁸, MD MPH; Lisa M. Lix⁹, PhD; Paul Shelton¹⁰, MD; David G. Munoz^{1,11,12}, MD. Delusions in Alzheimer's disease are associated with prefrontal and cerebellar atrophy. Canadian Geriatrics Journal. 2015 Oct 2. **Coauthor or Collaborator.**

2015 Oct 2 **Presenter.** Atrophy in the Default Mode Network Following the Development of Delusions in Patients with Alzheimer's Disease. Canadian Conference on Dementia. Ottawa, Ontario, Canada. Presenter(s): Corinne E. Fischer^{1,2}, MD; Winnie Qian¹, HBSc; Tom A. Schweizer^{1,3,4,5,6}, PhD; Colleen Millikin⁷, PhD; Zahinoor Ismail⁸, MD; Eric E. Smith⁸, MD MPH; Lisa M. Lix⁹, PhD; Paul Shelton¹⁰, MD; David G. Munoz^{1,11,12}, MD. The Default Mode Network (DMN), a resting state network encompassing the ventral and dorsal medial prefrontal cortex (mPFC), posterior cingulate, inferior parietal lobule, medial temporal cortex, hippocampal formation, and the precuneus, has shown abnormal connectivity in normal aging as well as in mental disorders including AD. Disrupted connectivity within the DMN may not be simply a function of disease progression, but may also play a role in the expression of delusions. The current study aimed to identify regions of gray matter atrophy following the development of delusions in patients with AD. We hypothesized that regions of the DMN would show atrophy.

Publication Details:

Corinne E. Fischer^{1,2}, MD; Winnie Qian¹, HBSc; Tom A. Schweizer^{1,3,4,5,6}, PhD; Colleen Millikin⁷, PhD; Zahinoor Ismail⁸, MD; Eric E. Smith⁸, MD MPH; Lisa M. Lix⁹, PhD; Paul Shelton¹⁰, MD; David G. Munoz^{1,11,12}, MD. Atrophy in the Default Mode Network Following the Development of Delusions in Patients with Alzheimer's Disease. Canadian Geriatrics Journal. **Senior Responsible Author.**

2015 Oct 2 **Presenter.** Identifying the brain activation patterns of patients with MCI during routine and complex driving conditions. Canadian Conference on Dementia. Ottawa, Ontario, Canada. Presenter(s): Hird MA, Vesely KA, Churchill NW, Fischer CE, Graham SJ, Schweizer TA. The current study combined driving simulation and functional magnetic resonance imaging (fMRI) to identify the brain activation patterns of individuals with MCI while performing driving tasks that ranged in complexity, including both routine (e.g., right and left turns) and more cognitively demanding (e.g. left turns with traffic) driving conditions. It was hypothesized that patients with MCI would show a significant deviation in brain activation compared to healthy controls during various driving conditions and, specifically, increased activation in frontal regions involved in executive functioning.

Publication Details:

Hird MA, Vesely KA, Churchill NW, Fischer CE, Graham SJ, Schweizer TA. Identifying the brain activation patterns of patients with MCI during routine and complex driving conditions. Canadian Geriatrics Journal. **Coauthor or Collaborator.**

Media Appearances

- 2015 Aug 27 **Speaker.** Synesthesia. Interviewer: Aisling Chin-Yee. National film board, Bravo television, Bravo. Toronto, Ontario, Canada. Presenter(s): Tom Schweizer, Corinn Fischer, Luis Fornazzari. This documentary profiled a patient of ours seen in the memory disorders clinic with synesthesia.
- 2015 Feb 6 **Invited Speaker.** Synesthesia. Interviewer: Amanda Pfeffer. Ontario Today, CBC radio. Ottawa, Ontario, Canada. The program featured a discussion about synesthesia. I was asked to comment on our patient, the second recorded case of acquired synesthesia. End date: 2015 Feb 6.
- 2013 Jul 31 **Speaker.** Synesthesia. Interviewer: Global news anchor. Global news, Global news. Toronto, Ontario, Canada. Presenter(s): Dr. **Corinne Fischer.** This interview dealt with the second reported case of acquired synesthesia.

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- 2011 Nov 4 Commentary on CORTEX publication. Radio interview with Dale Goldhawk, Goldhawk Live.
- 2011 Oct 13 Bilingualism and Dementia. Televised Interview, CBC news, The National. Commenting on CORTEX publication.
- 2004 Musical hallucinations. CBC radio interview.

3. PROVINCIAL / REGIONAL

Invited Lectures and Presentations

- 2009 Nov **Presenter.** "Treatment of BPSD: Latest Evidence". Ontario Long Term Care Association Annual Meeting. Toronto, Ontario, Canada.

4. LOCAL

Invited Lectures and Presentations

- 2016 Nov 16 **Chair.** Behavioural Neurology Rounds. Baycrest Hospital, Toronto, Canada. "Brain Scintigraphy in Neurodegenerative Disease: Concepts and Cases". Dr. Joseph Barfett. This lecture provided an overview of the role of SPECT in the diagnosis of neurodegenerative disorders.
- 2016 Nov 24 **Chair.** Neuroscience Research Rounds. St. Michael's Hospital, Toronto, Canada. From Concussion to Chronic Traumatic Encephalopathy – Facts and Fiction. Dr, Carmela Tartaglia. This lecture provided an overview of the neurologic sequelae of TBI.
- 2016 Sept 21 **Chair.** Behavioural Neurology Rounds, Baycrest Hospital, Toronto, Canada. "Brain Reserve Capacity: The role of Music". Presenter: Dr. Luis Fronazzari. This lecture provided an update on the mechanism of cognitive reserve.
- 2016 Mar 9 **Invited Lecturer.** Psychosis in the Elderly. University of Toronto. Toronto, Ontario, Canada. Presenter(s): Dr. **C. Fischer.** This lecture provided an overview of psychosis in the elderly to residents.
- 2016 Mar 4 **Invited Lecturer.** "It takes a village": an unusual case of psychosis in dementia with review of research findings. SMH Department of Psychiatry. Toronto, Ontario, Canada. Presenter(s): Dr. **Corinne Fischer.** This lecture provided an overview of recent research in psychosis in dementia.
- 2016 Jan 29 **Chair.** Neuroscience Research Rounds. St. Michael's Hospital. Toronto, Ontario, Canada. Presenter(s): Dr. Joseph Barfett. These rounds looked at the utility of CT angiography in neuroscience research.
- 2016 Jan 21 **Invited Lecturer.** Cognitive enhancing treatments in dementia. Grace Hospital. Toronto, Ontario, Canada. Presenter(s): Dr. **Corinne Fischer.** These rounds provided an important update on the state of dementia care with respect to cognitive enhancing treatments.
- 2015 Nov 12 **Invited Lecturer.** Cognitive Enhancing Treatments and Dementia: Where we have been, where we are now and where we are going. St. Michael's hospital DCFM. Toronto, Ontario, Canada. Presenter(s): Dr. **Corinne Fischer.** These rounds provided an update to family physicians on the state of dementia care.
- 2015 Nov 4 **Chair.** Behavioural Neurology Rounds. Baycrest Hospital. Toronto, Ontario, Canada. Presenter(s): Dr. Joseph Barfett. Correlates of SPECT imaging.
- 2015 Oct 23 **Chair.** Neuroscience Research Rounds. St. Michael's Hospital Neuroscience Research Division. Toronto, Ontario, Canada. Presenter(s): Dr. Sakina Rizvi. Neuroanatomical correlates of mood disorders.
- 2015 Jul 7 **Invited Lecturer.** Aging and the Brain--the shifting research landscape. St. Michael's Hospital Foundation. Toronto, Ontario, Canada. Presenter(s): Dr. **Corinne Fischer,** Dr. Luis Fornazzari. This

presentation gave an overview of recent developments in Alzheimer's disease research.

- 2015 Jun 19 **Chair.** Review of the spinal cord in MS by Ji Won Oh. St. Michael's hospital. Toronto, Ontario, Canada. Presenter(s): Ji Won Oh. These rounds were part of neuroscience research rounds and focussed on imaging of the spinal cord in MS.
- 2015 Jun 18 **Presenter.** Uncovering and Targeting the Neuroplasticity deficits in Dorsolateral Prefrontal Cortex of Individuals with Alzheimer's disease using TMS-EEG. University of Toronto. Toronto, Ontario, Canada. Presenter(s): Kumar S, Zomorodi R, Blumberger DM, **Fischer C**, Daskalakis ZJ, Mulsant BH, Pollock BG, Rajji TK.
- 2015 Jun 12 **Chair.** Psychiatry Grand Rounds. St. Michael's Hospital Department of Psychiatry. Toronto, Ontario, Canada. Presenter(s): Dr. Angela Golas. Anti-nmda receptor encephalitis--an overview of features and presentation of a case.
- 2015 May 22 **Chair.** Neuroscience Research Rounds--Dr. Sid Kennedy presenting. Neuroscience Research Rounds. Toronto, Ontario, Canada. Presenter(s): Sidney Kennedy. Overview of the neurobiology of mood disorders.
- 2015 Feb 27 **Chair.** Neuroscience Research Rounds--Dr. Benoit Mulsant presenting. St. Michael's Hospital. Toronto, Ontario, Canada. Presenter(s): Dr. Benoit Mulsant. An overview of mood disorders in the elderly.
- 2014 Jun 23 **Chair.** Keenan research summer student weekly seminar. St. Michael's Hospital. Toronto, Ontario, Canada. Presenter(s): Akhil Garg, Victor Goncalves, Linh Luong, Matthew To. Chaired weekly summer student seminar series.
- 2014 May 30 **Chair.** Demonic Copulation and Demonic Possession - Insights from Neuropathology. Neuroscience Research. Toronto, Ontario, Canada. Presenter(s): David Munoz.
- 2014 May 30 **Chair.** Managing Responsive Behaviours in the Acute Care Setting: Mental Health Professionals as Leaders. St. Michael's Hospital. Toronto, Ontario, Canada. Presenter(s): Lee Ringer and Heather McDoanld. These rounds focussed on managing behavioural symptoms in the acute care setting.
- 2013 Feb 13 **Presenter.** Language Disintegration as Prelude to Dementia in a case of FTD spectrum dementia. Baycrest Hospital. Toronto, Ontario, Canada. Presenter(s): **Corinne Fischer**. This was an interesting case description of apical dementia.
- 2012 Oct 18 **Invited Lecturer.** Overview of Geriatric Depression and Anxiety. Department of Geriatrics, University of Toronto. Toronto, Ontario, Canada. Presenter(s): Dr. **Corinne Fischer**. Delivered lecture to geriatric medical residents on geriatric psychiatry (overview of anxiety and depression). (Trainee Presentation).
- 2012 Feb 15 **Invited Speaker.** Psychosis and Alzheimer's disease: New research directions. Baycrest Hospital. Toronto, Ontario, Canada. Presenter(s): Dr. **Corinne Fischer**. Provided an overview of the latest research developments in psychosis in Alzheimer's disease.
- 2011 Apr **Presenter.** "Aging and the Brain: What can be done?". St. Michael's Hospital Foundation, St. Michael's Hospital. Toronto, Ontario, Canada.
- 2011 Mar 26 **Invited Lecturer.** Overview of anxiety and depression in the elderly. Department of family practice, University of Toronto. Toronto, Ontario, Canada. Presenter(s): Dr. **Corinne Fischer**. Review of the elderly course for family doctors.
- 2011 Mar **Co-presenter.** "Bilingualism and Cortical Atrophy in Dementia". St. Michael's Hospital Psychiatry Grand Rounds. Toronto, Ontario, Canada. (Continuing Education).
- 2010 Sep **Keynote Speaker.** "Aging and the Brain: What can be done?". St. Michael's Hospital Foundation, 2010 Legacy of Care Presentation. Toronto, Ontario, Canada.
- 2010 Jun **Presenter.** "Delusions, Alzheimer's Disease and Frontal Lobe Function: Exploring the Crossroads". Behavioural Neurology Section Meeting. Toronto, Ontario, Canada.

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- 2010 Feb **Presenter.** "Mental Health and Long Term Care: Results of the ACCORD study". Baycrest Hospital Psychiatry Grand Rounds. Toronto, Ontario, Canada.
- 2010 Jan **Co-presenter.** "Mental Health and Long Term Care". St. Michael's Hospital PES Best Practice Day. Toronto, Ontario, Canada. Presenter(s): Rigatti M, **Fischer C**.
- 2009 Sep **Presenter.** "Mental Health and Long Term Care: Results of the ACCORD study". St. Michael's Hospital Psychiatry Grand Rounds. Toronto, Ontario, Canada.
- 2009 Apr **Presenter.** "Researching the Cognitive Aspects of Aging: Rewards and Challenges". St. Michael's Hospital REB Rounds. Toronto, Ontario, Canada.
- 2008 Sep **Presenter.** "Memory and Aging: What can be Done?". St. Michael's Hospital Foundation. Toronto, Ontario, Canada.
- 2008 Mar **Presenter.** "Delusions and Dementia: New Frontiers". Baycrest Hospital Psychiatry Grand Rounds. Toronto, Ontario, Canada. (Continuing Education).
- 2008 Jan **Presenter.** "Cognitive Enhancers in Dementia: New Frontiers". St. Michael's Hospital Psychiatry Grand Rounds. Toronto, Ontario, Canada. (Continuing Education).
- 2007 Oct **Presenter.** "Overview of Delirium". Vascular Surgery Service, St. Michael's Hospital. Toronto, Ontario, Canada.
- 2007 Mar **Presenter.** "Assessing capacity in dementia". Occupational Therapy Department, St. Michael's Hospital. Toronto, Ontario, Canada.
- 2007 Feb **Presenter.** "Cognitive Enhancers and Dementia". St. Michael's Hospital Family Practice Grand Rounds. Toronto, Ontario, Canada. (Continuing Education).
- 2004 May **Presenter.** "Update on Dementia". St. Michael's Hospital Family Practice Grand Rounds. Toronto, Ontario, Canada. (Continuing Education).
- 2002 Oct **Presenter.** "Overview of Advances in Dementia". St. Michael's Hospital Family Practice Grand Rounds. Toronto, Ontario, Canada. (Continuing Education).
- 2002 Feb **Presenter.** "Psychosis in Dementia". St. Michael's Hospital Psychiatry Grand Rounds. Toronto, Ontario, Canada. (Continuing Education).
- 2000 Sep **Presenter.** "Frontal Lobe Dementia". Regional Geriatric Program meeting. Toronto, Ontario, Canada.

Presented Abstracts

- 2010 Jul 20 Examining the Link Between Delusions, Frontal Lobe Processes and Real World Functioning in Alzheimer Patients. Li Ka Shing Summer Student Research Day Guide. Presenter(s): Forrest L, **Fischer C** (co-author), Schweizer TA.
- 2007 Jun **Presenter.** Neurocognitive Profiles of Older Adults with and without Major Depression. University of Toronto Harvey Stancer Research Day Guide. Presenter(s): **Fischer C** (principal author), Atkins JH, Bozanovic R, Norris M, Herrmann N, Nisenbaum R, Rourke SB.
- 2007 Jun **Presenter.** The Impact of Depression on the Accuracy of Subjective Memory Complaints in Geriatric Patients. University of Toronto Harvey Stancer Research Day Guide. Presenter(s): **Fischer C** (principal author), Atkins J.H., Bozonovic R, Norris M, Rourke SB.
- 2007 Jun **Presenter.** The Clinical Relevance of Subjective Memory Complaints in Older Persons. University of Toronto Harvey Stancer Research Day Guide. Presenter(s): **Fischer C** (principal author), Millikin C, Bozanovic R, Norris M, Rourke SB.
- 2002 Jun **Presenter.** Neuropsychological Correlates of Delusions in Dementia. University of Toronto Department of

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Psychiatry Harvey Stancer Research Day guide. Presenter(s): **Fischer C** (principal author), Milliken C, Ladowsky-Brooks R.

Media Appearances

2013 Jul 30 **Speaker.** Synesthesia. Interviewer: Kris McKusker. Health, 680 news. Toronto, Ontario, Canada. This interview dealt with the second reported case of acquired synesthesia.

5. OTHER

Invited Lectures and Presentations

2014 Jun 9 **Presenter.** TDRA clinics: existing resources and barriers to conducting clinical studies. TDRA. Toronto, Ontario, Canada. Presenter(s): **Corinne Fischer**, mario Masellis.

Presented Abstracts

2015 Oct 16 Pathologic substrate, risk factors, and functional impact of delusions and hallucinations in neuropathologically diagnosed Alzheimer's disease. 55th Annual Canadian Association of Neuropathologists. Quebec City, Ontario, Canada. Presenter(s): Munoz DG, Qian W, Schweizer TA, Fischer CE. This abstract reports on pathologic correlates of psychosis in AD.

2014 Mar 15 **Presenter.** Grey Matter Atrophy Associated with Delusional Onset in Mild Cognitive Impairment Patients. AAGP. Miami, Florida, United States. We conducted a longitudinal voxel-based morphometry (VBM) analysis on a well-defined cohort of ADNI participants with MCI, who developed delusions over the course of participation. We hypothesized that enhanced atrophy in the right frontal areas of the brain would attenuate the monitoring/inhibitory function of these areas, thus contributing to delusional onset.

G. Teaching and Design

I think my dossier reflects my commitment to teaching a diverse group of learners including elective students, undergraduate medical students, residents as well as other allied health professionals. My contributions to teaching are very much linked to my role at St. Michael's Hospital as being the sole provider of education in the field of Geriatric Psychiatry. My teaching has primarily been in the realm of geriatric psychiatry, my chosen field, and has been in a number of clinical domains including Consultation Liaison Psychiatry, Outpatient/Memory Disorder Clinic Psychiatry and Long-Term Care Psychiatry.

When I first began teaching during the earlier part of my career at St. Michael's Hospital, most of my teaching was focused in the area of Consultation Liaison Psychiatry as well as occasional outpatient assessment. As a result, the majority of learners were medical students or residents doing their core rotations. In later years, I focused my attention more on cognitive assessment and the development of the St. Michael's Hospital Memory Disorders Clinic. This shifted the focus of my teaching slightly, allowing me to provide a broader experience for learners and also attracting more specialized learners, including research assistants and elective students with an interest in neuroscience. Finally, more recently my focus has shifted again to the development of a Long-Term Care Outreach team. As a result, my teaching has shifted again, to the assessment of older patients with cognitive disorders and behavioural syndromes. This has enriched the learning experience for students I have taken on and also provided an important opportunity to provide education to front line staff, facilitating knowledge translation.

In terms of my role in continuing medical education, this has also shifted through the years. In the early part of my career, the focus was on more general aspects of Geriatric Psychiatry. In more recent years the focus has shifted to the management of patients with dementia in keeping with the shift in my clinical focus. Finally, I have mentored a number of research students as well as undergraduate medical students who have gone on to have promising careers in fields linked to geriatric psychiatry. I think my teaching dossier and my evaluations reflect sustained teaching effectiveness.

1. INNOVATIONS AND DEVELOPMENT IN TEACHING AND EDUCATION

- 2013 Symposium on Psychotic Symptoms in Dementia Presented at the 2013 AAGP, Continuing Education, Faculty of Medicine, Dept of Psychiatry, Geriatric Psychiatry
In 2013 I assembled a group of experts in the field of geriatric psychiatry to provide the latest information on psychotic symptoms in Alzheimer's disease, including clinical presentation, neurobiological findings and management. The symposium was entitled "Fitting a square peg into a round hole: understanding psychotic symptoms in Alzheimer's disease" and featured renowned figures in the field including Dr. Rob Sweet as well as prominent Canadians such as Zahinoor Ismail. The symposium took place in Los Angeles at the American Association of Geriatric Psychiatry and was very well received.
- 2012 Symposium on Psychotic Symptoms in Dementia Presented at the 2012 CAGP, Continuing Education, Faculty of Medicine, Dept of Psychiatry, Geriatric Psychiatry
In 2012 I assembled a group of experts to provide an update on a very important yet often neglected topic in geriatric psychiatry, psychotic symptoms in Alzheimer's disease. This symposium, entitled "Psychotic symptoms in Alzheimer's disease", featured international figures in geriatric psychiatry including Dr. Benoit Mulsant as well as national figures such as Dr. Zahinoor Ismail. The symposium provided the latest information on clinical findings, neuroimaging correlates and treatment. It drew a record audience and was very well received.
- 2012 Keynote Speaker: A spotlight on aging: caring for Canada's changing population, Continuing Education, Faculty of Medicine, Dept of Psychiatry, Geriatric Psychiatry
In November of 2012 I participated in a national round table discussion focusing on issues associated with aging and dementia. The round table was sponsored by We Care, the largest home care organization in the country, and featured members of the public, various media and advocacy groups. The event was well attended and very positively received.
- 2012 Annual Scientific Meeting Advisory Board CAGP 2012, Faculty Development, Faculty of Medicine, Dept of Psychiatry, Geriatric Psychiatry
In 2012 I become involved with the CAGP and joined the advisory board for the 2012 annual scientific meeting. My role on the committee was to review and evaluate scientific abstracts, chair sessions and review promotional material. The conference was held jointly with the Canadian Coalition of Seniors Mental Health and was a resounding success.
- 2008 Toronto Geriatric Mental Health Conference: Behavioural and Psychological Systems of Dementia and Late-Life Depression; Translating Knowledge into Practice. 2008 89 Chestnut Street, Conference Centre, Toronto, ON, Faculty Development, Faculty of Medicine, Dept of Psychiatry, Geriatric Psychiatry
In 2008, I co-chaired an important conference entitled Toronto Geriatric Mental Health Conference: Behavioural and Psychological Systems of Dementia and Late-Life Depression; Translating Knowledge into Practice. This was done in collaboration with the Division of Geriatric Psychiatry and the Centre for Addiction and Mental Health. The Division of Geriatric Psychiatry at the University of Toronto hosts an annual conference as does the St. Michael's Hospital Mental Health Service. This conference was an attempt to bring both conferences together. I co-chaired the conference along with Dr. Zahinoor Ismail who at the time was based at the Centre for Addiction and Mental Health. On this occasion, I had the opportunity to help develop a conference focusing very much on issues relevant to long-term care including behavioural syndromes in dementia as well as late-life depression. The conference was held on October 24, 2008. It featured a number of workshops as well as several keynote presentations by internationally renowned specialists including Dr. Eric Tangelos, who spoke on non-pharmacological approaches to dementia care, Dr. Nathan Herrmann, who spoke on challenges in pharmacological management of neuropsychiatric disturbances in dementia and Dr. Benoit Mulsant who spoke on antidepressant use in older adults. There was also a panel discussion involving best practices in service delivery in long-term care followed by several workshops that were run by several local specialists.

The planning for this conference started approximately one year prior to the actual event. It involved lining up keynote and other speakers, establishing core content and identifying appropriate workshop topics. The conference was a great success, registering approximately 218 registrants and receiving a total of 168 evaluation forms. Overall, the feedback indicated the conference was successful in achieving its objectives. Keynote and panel presentations in the morning as well as six workshops in the afternoon were well received with positive feedback indicated for all venues. Sixty-seven percent of respondents rated the conference as excellent. Seventy-nine percent rated the conference organization and registration as excellent and 63 percent said it satisfied their objectives. Comments included:

- *'Excellent speakers. Dr. Tangelos was outstanding.'*
- *'Very interesting, clinically relevant.'*
- *'Good speakers in general but long day and some speakers could have managed time better.'*
- *'Great topic – very relevant.'*
- *'Excellent.'*
- *'Very smooth and well organized. Better than most.'*

2007 Oct - 2008 Oct

Toronto Geriatric Mental Health Conference: Behavioural and Psychological Symptoms in Dementia and Late Life Depression, Continuing Education, Faculty of Medicine, Dept of Psychiatry, Geriatric Psychiatry, St. Michael's Hospital
This one day conference targeted both physicians and allied health professionals who worked in Long Term Care. The conference drew over 200 participants from across the province of Ontario. It consisted of a keynote speaker in the morning followed by plenary sessions in the morning, then a panel discussion and workshops in the afternoon. I co-chaired this one day conference along with Dr. Zahinoor Ismail at CAMH. This involved attending numerous meetings, contacting speakers, editing promotional material, etc. In terms of impact, the conference was a great success, registering approximately 218 registrants and receiving a total of 168 evaluation forms. Overall, the feedback indicated the conference was successful in achieving its objectives. Keynote and panel presentations in the morning as well as six workshops in the afternoon were well received with positive feedback indicated for all venues. Sixty-seven percent of respondents rated the conference as excellent. Seventy-nine percent rated the conference organization and registration as excellent and 63 percent said it satisfied their objectives.

H. Research Supervision

1. PRIMARY OR CO-SUPERVISION

Undergraduate Education

2015 Jan - present	Primary Supervisor. B. Sc. Nazaneen Kaliwal. <i>PACT-MD.</i>
2012 Feb - present	Co-Supervisor. B. Sc. Winnie Qian. Supervisee Position: Part time research assistant, Supervisee Institution: University of Toronto at Scarborough. <i>Delusions and functional impairment in Alzheimer's disease.</i> Collaborator(s): Dr. Tom Schweizer. Completed 2013.
2013 Jul - 2014 Jul	Co-Supervisor. B. Sc. Daniel Attalla. Supervisee Position: Undergraduate - Neuroscience co-op program, Supervisee Institution: University of Toronto, Scarborough campus. Collaborator(s): Tom Schweizer.
2011 May - 2012 Jan	Co-Supervisor. B. Sc. Jennifer Gu. Supervisee Position: Undergraduate university student at Brown University, Supervisee Institution: Brown University. <i>Determining the impact of delusions on functional performance in patients with Alzheimer's disease.</i> Collaborator(s): Tom Schweizer. Completed 2012.

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- 2010 Oct - 2011 Mar **Co-Supervisor.** Sidra Sindhu. *Retrospective memory clinic database.* Collaborator(s): Tom Schweizer. Completed 2011.
- 2010 Jun - 2011 Aug **Co-Supervisor.** Lydia Beck. *Retrospective memory clinic database.* Collaborator(s): Tom Schweizer. Completed 2011.
- 2010 May - 2010 Aug **Co-Supervisor.** Lauren Forrest. Supervisee Position: Medical student, Supervisee Institution: Western University. *Determining the impact of delusions on functional performance in patients with Alzheimer's disease.* Collaborator(s): Tom Schweizer. Completed 2011.
- 2009 Sep - 2010 May **Co-Supervisor.** Jenna Ware. *Determining the impact of bilingualism on cortical atrophy in patients with Alzheimer's disease.* Collaborator(s): Tom Schweizer. Completed 2010.
- 2009 May - 2009 Aug **Co-Supervisor.** Rosalind Sham. Supervisee Institution: McGill University. *Determining the impact of ses on a diagnosis of dementia in an inner city memory disorders clinic.* Collaborator(s): Tom Schweizer. Completed 2009.
- 2008 Sep - 2010 May **Co-Supervisor.** Jemcy Joy. *Determining the impact of delusions on functional impairment in patients with Alzheimer's disease.* Collaborator(s): Tom Schweizer. Completed 2010.
- 2008 Sep - 2008 Dec **Co-Supervisor.** Emily Yeung. *Determining the impact of ses on a diagnosis of dementia in an inner city memory disorders clinic.* Collaborator(s): Tom Schweizer. Completed 2008.
- 2007 Jun - 2008 Jan **Co-Supervisor.** Izabella Abramov. *Evaluation of the Toronto Geriatric Mental Health Network.* Collaborator(s): Suzanne Ross. Completed 2008.
- 2007 May - 2009 May **Co-Supervisor.** Tawnya Hansen. *Evaluation of the Toronto Geriatric Mental Health Network.* Collaborator(s): Suzanne Ross. Completed 2009.
- 2005 Dec - 2006 Jun **Co-Supervisor.** Jennifer Brown. *Determining the impact of dementia on antidepressant treatment response in older persons.* Collaborator(s): Sean Rourke. Completed 2006.
- 2004 Jan - 2005 Mar **Co-Supervisor.** Morteza Rahmani. Supervisee Position: Geriatric Psychiatry Fellow, Supervisee Institution: Beth Israel Medical Center. *Retrospective memory clinic database.* Collaborator(s): Mireille Norris. Completed 2005.
- 2002 Sep - 2004 May **Co-Supervisor.** Radenka Bozanovic. *Determining the impact of ses on response to cognitive enhancers in patients living in the inner city of Toronto.* Collaborator(s): Sean Rourke. Completed 2004.

Graduate Education

- 2015 Jul - 2017 Jul **Co-Supervisor.** MSc. Winnie Qian, Medical Science, Neuroscience. Supervisee Position: RA, Supervisee Institution: University of Toronto. *Functional MRI correlates of delusions in AD.* Supervisor(s): Tom Schweizer, Corinne Fischer. Collaborator(s): Tarek Rajii.
- 2016 Sept—2018 Sept **Supervisor,** MSc, Melissa Leggieri, Neuroscience. Supervisee Position: RA. Supervisee Institution: IMS, University of Toronto. *The impact of passive music listening on functional connectivity in AD/MCI.* Supervisor(s): Corinne Fischer. Collaborator(s): Michael Thaut

Postgraduate MD

- 2015 Jan - present **Primary Supervisor.** Blessing Jaja.

I. Creative Professional Activities

1. PROFESSIONAL INNOVATION AND CREATIVE EXCELLENCE

- 2012 Jul 1 - 2013 Jun 30 Founding Director of the St. Michael's Hospital Memory Disorders Clinic July 2001—present. One of my primary focuses over the course of the past ten years has been the development

of a specialized Memory Disorders Clinic to serve the inner-city population of metropolitan Toronto. This was in response to the realization that many of the patients I saw early in my career had undiagnosed cognitive impairment and had not received any formal evaluation. Thus, they were often left undiagnosed and untreated. With evolving treatments for Alzheimer's disease and the realization that these treatments were most effective when administered early, I felt this situation was untenable. While Memory Disorders Clinic did exist in such specialized centres as Baycrest Hospital and Sunnybrook Health Sciences Centre there had been no such clinics based at St. Michael's Hospital, where the prevalence of dementia is arguably amongst the highest. I was able to leverage support for this clinical from the hospital leadership and also benefitted from the acquisition of donor funds.

I consulted with the directors of the memory disorders clinics across the city as well as stakeholders including family doctors and specialists. I met with experts in related disciplines such as neuropsychology, geriatric medicine and neurology. Through meetings with various stakeholders, allied health and related disciplines, the clinic was established in 2001 and runs to this date. This clinic has served as an important platform both for research and education, in addition to providing patients with state of the art medical care. At a local level, patients have had access to new and innovative treatments for Alzheimer's disease and related dementias. At a national level, we have been able to conduct important research that has led to scientific breakthroughs in areas such as cognitive reserve and neuropsychiatric symptoms in dementia. We have also been successful in securing both peer and non-peer reviewed funding from local and national agencies and have contributed significantly to the literature through publications in scientific journals as well as national and international scientific meetings.

- Creation of an innovative memory disorders clinic focused on vulnerable inner city elderly.
- 200 new assessments and 400 reassessments per year
- Improved access to diagnostic services for patients living in the inner city of Toronto with cognitive disorders.
- Improved access to specialized treatments for patients with memory disorders living in the inner city of Toronto.
- Improved access to support networks such as the CCAC for patients and their families living in the inner city of Toronto
- Increased capacity of family doctors treating patients with dementia serving the inner city through educational rounds.
- Increased enrollment in research studies.
- Over a million dollars in peer and non-peer reviewed research funding
- Increased media attention at a local, national and international level
- Membership in the Toronto Dementia Research Alliance
- Training site for learners (medical students, residents, fellows) in conducting cognitive assessments.

2012 Jul 1 - 2013 Jun 30

Founding Director of the St. Michael's Hospital Geriatric Mental Health Outreach Team. When I first came to St. Michael's Hospital and after my first few years I became keenly aware of the need to provide more formalized consultation to Long Term Care Homes (LTCH's) in the area, most of which did not have any regular access to a psychiatrist. As a result of trends in society and the aging population, LTCH's were having to cope with patients who had significantly greater behavioural issues with very limited resources. In addition, the acute care sector of most hospitals had little to offer such patients and would often direct them back to their facilities after brief stays in emergency departments with little change. Furthermore, the area of south east Toronto is particularly challenging given that patients have very limited means and high rates of psychiatric co-morbidity. This overall climate of frustration led to the dedication of federal health accord funds in 2005 to the development and augmentation of specialized psychogeriatric outreach teams in the region of Toronto. While there were numerous ad hoc teams spread through the city and a number of psychiatrists who provide ad hoc consultation, there was no program dedicated to LTCH's in southeast Toronto.

In 2005, I was successful in securing dedicated funding for the development of a Geriatric Mental Health Outreach Team that would target residents in LTCH's with significant behavioural symptoms. The funding provided support for a physician, neuropsychologist and nurse clinician and targeted seven homes in the area of southeast Toronto, including Heritage Nursing Home, Reikai Centre, Wellesley Central Place, True Davidson Acres, Main Street Terrace, Belmont House and Nisbett Lodge. Once the funding was secured, I participated in the hiring of key staff and met with administrators and medical staff from the assigned homes.

At a local level, the existence of this team has significantly reduced transfers to emergency departments and led to improved quality of care for residents in the homes we serve. In addition, we have been able to significantly enhance the capacity of LTCH's to cope with residents displaying responsive behaviours. Finally, we have been able to use the homes we serve as a platform for research, leading to increased understanding of neuropsychiatric symptoms in dementia disseminated through publications, grants and presentations at scientific meetings.

- Annualized funding in the range of \$228,000.00/year from the Toronto Central LHIN
- Sustained MOHLTC funding
- Access to an innovative program for residents in assigned long term care homes.
- Reduced transfers to emergency departments.
- Consistently met ministry targets (200—300 visits per month)
- Letters of support from DOC's and administrative staff
- Increased capacity of staff within LTCH's to deal with problem behaviours
- Increased capacity of front line staff in homes
- Increased capacity of trainees to manage patients with difficult behaviours
- Improved care and quality of life for residents and their families
- Positive feedback from a satisfaction survey conducted in 2009
- Training site for students, residents and allied health personnel
- Peer and non-peer reviewed funding from national agencies (Brian Canada, CIHR, Alzheimer society of Canada)
- Part of national research initiatives (CIHR neurodegenerative disease platform, neuropsychiatric symptoms).
- Publications in seminal journals (psychiatric services, cortex, neurology, dementia and geriatric cognitive disorders)
- Presentations at local, regional, national and international scientific meetings (CAGP, AAGP, OLTCA meeting)

2012 Jul 1 - 2013 Jun 30

Psychogeriatric service development in the city of Toronto (Creation of the Toronto Geriatric Mental Health Outreach Network).

I was appointed clinical care co-ordinator for the Division of Geriatric Psychiatry in 2002. The purpose of this role was to improve psychogeriatric clinical service delivery in the city of Toronto, specifically in the downtown core where services had been documented to be quite fragmented. I led number of meetings which were attended by key stakeholders, including Ministry of Health representatives as well as physicians and allied health professionals from a variety of hospitals throughout the downtown core. At these meetings we discussed how the system could be improved using innovative approaches. I reported on our progress every few months at the Geriatric Psychiatry divisional meeting.

In 2005 federal health accord funds became available to enhance psychogeriatric services in Toronto. We used these funds to establish an innovative model of service delivery in which Long Term Care Homes (LTCH's) were paired with outreach teams across the city, thus ensuring more equitable access to care, reducing transfers to acute care and improving the capacity of LTCH's to deal with responsive behaviours. A number of new committees were formed, including the Long Term Care/Mental Health Framework Committee and the Geriatric Mental Health Network Committee. I led the alignment subcommittee of the LTC/MH committee and thus played a pivotal role in the development of this system.

I also conducted an important evaluation of the system changes, which was funded by the Ministry of Health and Long Term Care and which ultimately led to a key report submitted to the Toronto Central LHIN in 2008. This report has been used by government bodies in subsequent years to inform policy making at a regional and national level, including such projects as "Behavioural Supports Ontario". In addition, the findings of this report have been published in the scientific literature and presented at national academic meetings, leading to broader dissemination of these findings at an academic level. I have been able to continue my involvement in system issues at a national level as a member of the Board of Directors of the Canadian Association of Geriatric Psychiatry.

- Development of an innovative model of care for elderly LTCH residents displaying responsive behaviours.
- Creation of a service framework for psychogeriatric services in Toronto (LTC/MH framework committee, Creation of a Geriatric Mental Health Outreach network committee)
- Increased capacity for Toronto based LTCH's to deal with responsive behaviours
- Increased federal funding for psychogeriatric services in Toronto
- Improved care for residents in Toronto LTCH's suffering from dementia and related conditions.
- Reduced transfers to emergency departments.
- Increased knowledge and expertise of staff in LTCH's in Toronto.
- Greater involvement of academic health care centres in LTCH's.

- Creation of a formal report submitted to the Toronto Central LHIN in 2008 highlighting the benefits and gaps in the system.
- Impact of report on health policy in this area (local and national initiatives in geriatric psychiatry such as the BSO project, etc).
- Creation of a framework of care, allowing for implementation of other initiatives (BSO project).
- Lay publications (Toronto Central LHIN report).
- Scientific presentations at national meetings (Canadian Association of Geriatric Psychiatry Annual meeting).
- Publications in scientific journals

2. CONTRIBUTIONS TO THE DEVELOPMENT OF PROFESSIONAL PRACTICES

2012 Jul 1 - 2013 Jun 30 **Influencing Physician Practice.**
In my role as the director of Geriatric Psychiatry at St. Michael's hospital, I have been able to have a direct impact on the training of physicians who come through my program. I have been responsible for developing a number of initiatives that have improved clinical practice as well as quality of care. These include;

- Development of a diverse training program integrating consultation-liaison psychiatry, long term care consultation and memory clinic training.
- Collaborative approach to care incorporating behavioural neurology.
- Integration of clinical care with research through weekly memory disorder clinic meetings.
- Integration of neuropsychological testing through affiliation with the Toronto Dementia Research Alliance
- Mentoring of elective, co-op and research students interested in the treatment of patients with neurodegenerative disorders.
- Trained 2-4 residents per year in geriatric psychiatry
- Attracted 2-4 elective students per year interested in geriatric psychiatry
- Over 200 requests/yr for summer student placements
- Trainees have gone on to pursue careers in fields such as medicine and graduate school

2012 Jul 1 - 2013 Jun 30 **Improving Community Based Practice.**
Through the creation of the Geriatric Mental Health Outreach Network and the evaluation I conducted, I have been able to have significant influence over professional practice,

specifically as it pertains to outreach to long term care homes. The new network we established forged important linkages between long term care homes and academic teaching hospitals, leading to the adoption of best practices. Furthermore, based on the outcome of the evaluation, we were able to make specific recommendations to physicians and teams involved in long term care homes that led to improved clinical practice. These improvements in clinical practice have had a direct and lasting impact on the quality of care of patients and contributed to greater system integration. We were also able to advocate for greater funding for psychogeriatric services and improved access to inpatient behavioural beds. The new system created stronger linkages between long term care homes, emergency departments and specialty beds, improving system flow and leading to better treatment outcomes.

- Creation of 13 new outreach teams affiliated with hospital across the city
- Provision of care to 86 LTCH's
- Improved access to specialty beds
- Addition of new specialty beds
- Adoption of common tools for assessing patients
- Greater integration between acute care sector , LTCH's and the CCAC

2012 Jul 1 - 2013 Jun 30

Influencing Health Policy and Organizational Decision Making.

Over the years since being involved in the development of psychogeriatric services in Toronto I have developed a close working relationship with policy makers. In the early years, I assembled a team of physicians, nurses, administrators and doctors who came together to develop strategies for improving the quality of clinical care in downtown Toronto. In later years, I was pivotal in the creation of the Long term Care/Mental Health Framework Committee and chaired the alignment subcommittee. I have taken a lead role in program evaluation and authored a Ministry of Health Funded report which led to key recommendations that has guided the development of psychogeriatric services in down town Toronto. This report has gone on to influence other national and regional initiatives in this area, such as Behavioural Supports Ontario. Finally, in recognition of my work, in 2012 I was elected to the board of directors of the Canadian Association for Geriatric Psychiatry. Here, I have continued to have influence over policies and procedures at a national level.

- a. Consulting to policy makers:
 - i Evaluation of the Toronto Geriatric Mental Health Outreach Network
 - ii Behavioural Support Ontario, Toronto chapter
- b. Membership in TCLHIN committees
 - i Long Term Care/Mental Health Steering Committee
 - ii Behavioural Supports Ontario strategy committee
- c. Membership in national committees
 - I Board of Directors, Canadian Association of Geriatric Psychiatry
 - li Communications chair, Canadian Association of Geriatric Psychiatry.
 - Enhanced government funding for psychogeriatric services.
 - Increased integration between LTCH's, acute and tertiary care.
 - Increased funding for behavioural supports.
 - Increased funding for behavioural beds.
 - Improved system flow.

3. EXEMPLARY PROFESSIONAL PRACTICE

2012 Jul 1 - 2013 Jun 30

Training the next generation of geriatric psychiatrists.

Since founding the geriatric psychiatry program at St. Michael's Hospital, I have had significant impact on trainees I have mentored, both in the areas of research and clinical practice. I have emphasized a balanced approach to clinical practice, one that emphasizes integrating related disciplines such as neurology and one that is fully integrated with clinical research. With the recent achievement of subspecialty status for geriatric psychiatry, I have

been involved in helping to shape the curriculum for new trainees, through my involvement in the geriatric subspecialty residency committee. As well, I have participated regularly in our program's centralized seminar series, thus contributing directly to the knowledge and expertise of trainees. Finally, through my recent election to the Board of Directors of the Canadian Association of Geriatric Psychiatry, I have been able to have influence over policies and procedures at a national level. These strategies have focused on engendering interest in geriatric psychiatry and related disciplines among trainees.

- Increased number of subspecialty geriatric psychiatry residents in Canada
- Consistently recognized as an excellent training site for residents based on site report data.
- Increased knowledge of geriatric psychiatry among non geriatric psychiatrists
- Increased interest in clinical research among trainees.
- Involvement of trainees in peer-reviewed grants/publications

2012 Jul 1 - 2013 Jun 30

- Increased number of subspecialty geriatric psychiatry residents in Canada • Consistently recognized as an excellent training site for residents based on site report data. • Increased knowledge of geriatric psychiatry among non geriatric psychiatrists • Increased interest in clinical research among trainees. • Involvement of trainees in peer-reviewed grants/publications.

Over the course of the past few years, I have mentored several undergraduate neuroscience students in clinical research. By working in close collaboration with a dedicated research scientist I have succeeded in creating an atmosphere where students have an opportunity to initiate projects as well as participate in them. Thus, interest in co-op placements has expanded considerably in the past few years, from a few application to approximately 200 per year. Many of the students whom I have mentored have gone on to pursue promising careers in fields such as medicine and graduate school.

- Increased number of applications from a few to 200 over the years
- Positive testimonials (see teaching section)
- Students who have gone on to pursue careers in medicine, graduate school, etc
- Increased involvement of trainees in poster presentations, publications and grants