

# Angela Tam

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## Education

- 2013–2018 **Ph.D. in Neuroscience**, *McGill University*, Montreal, Canada.  
Advisors: Pierre Bellec & John Breitner  
Thesis: Predicting Alzheimer's dementia from heterogeneous patterns of neurodegeneration and functional connectivity  
Keywords: neuroimaging, brain networks, machine learning, prediction, biomarker development, neurodegenerative disease
- 2011–2013 **M.Sc. in Neuroscience**, *Queen's University*, Kingston, Canada.  
Advisor: Angeles Garcia  
Thesis: Neuroimaging attentional control in the Stroop task  
Keywords: cognition, neuroimaging, aging
- 2007–2011 **B.Sc. in Psychology, Magna Cum Laude**, *University of Ottawa*, Ottawa, Canada.  
Advisor: Patrick Davidson  
Thesis: The effects of aging and sleep quality on location and distance-based processes in memory for when something happened

## Experience

### Research

- 2018–present **Postdoctoral Fellow**, *National University of Singapore*, Singapore.  
Advisor: B.T. Thomas Yeo  
Project: Prediction of cognition and psychiatric symptoms using multimodal neuroimaging
- 2011 **Research Assistant**, *Douglas Hospital Research Centre*, Montreal, Canada.  
Supervisor: M. Natasha Rajah
- 2009–2010 **Research Assistant**, *Ottawa Hospital*, Ottawa, Canada.  
Supervisor: Natasha Ballen

### Consulting

- 2019–present **Research consultant**, *perceiv.ai*.

### Teaching

- 2018 **Instructor**, *Montreal Brainhack School*, Montreal, Canada.
- 2016 **Teaching Assistant**, *Université de Montréal*, Montreal, Canada.

### Clinical

- 2011–2013 **Psychometrist**, *Hotel Dieu Hospital*, Kingston, Canada.

### Science Communication

- 2017 **Podcaster**, *Broad Science*, Montreal, Canada.
- 2012–2013 **Neuroscience Outreach Volunteer**, *Queen's University*, Kingston, Canada.

## University Services

- 2016–2017 **Student Council Program Representative**, *McGill Post-Graduate Student Society*, Montreal, Canada.
- 2014–2017 **Internal Affairs Event Coordinator**, *McGill Post-Graduate Student Society*, Montreal, Canada.
- 2014–2015 **Student Representative on the Working Group to Review Regulation on Conduct in Research**, *McGill University*, Montreal, Canada.

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## Professional Services

### Peer Reviewer.

PLoS ONE (PLOS), Clinical Neurophysiology (Elsevier), Brain Informatics (SpringerOpen), NeuroImage (Elsevier)

- 2016 **Poster Judge**, *Douglas Hospital Research Centre's Undergraduate Expo*, Montreal, Canada.

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## Awards

- 2018 **Alzheimer's Association International Conference Travel Fellowship.**
- 2017 **Graduate Research Enhancement and Travel Award**, *McGill University*, Montreal, Canada.
- 2017 **Research in Aging Bursary \$7000**, *Centre de recherche de l'institut universitaire de gériatrie de Montréal*, Montreal, Canada.
- 2016 **Hendlisz Award for Best Student Paper Finalist**, *Douglas Hospital Research Centre*, Montreal, Canada.
- 2015 **International Training Programme on Ageing Fellowship**, *Joint fellowship funded by the Canadian Institutes of Health Research: Institute of Aging & Centre for Ageing Research and Development in Ireland.*
- 2015 **Doctoral Award \$60,000**, *Fonds de recherche du Québec – Santé*, Quebec, Canada, (declined).
- 2014 **Alzheimer's Association International Conference Travel Fellowship.**
- 2014 **Graduate Research Enhancement and Travel Award**, *McGill University*, Montreal, Canada.
- 2013 **Grad Excellence Award in Neurology & Neurosurgery**, *Integrated Program in Neuroscience*, *McGill University*, Montreal, Canada.
- 2012 **Ontario Graduate Scholarship \$15,000**, *Ministry of Training, Colleges and Universities*, Canada.
- 2012 **Centre for Neuroscience Award for Excellence**, *Centre for Neuroscience Studies*, *Queen's University*, Kingston, Canada.
- 2012 **Honourable Hugh F. Gibson Memorial Award**, *Centre for Neuroscience Studies*, *Queen's University*, Kingston, Canada.
- 2011 **Honourable Hugh F. Gibson Memorial Award**, *Centre for Neuroscience Studies*, *Queen's University*, Kingston, Canada.

- 2011 **Queen's Graduate Award**, *Queen's University*, Kingston, Canada.
- 2011 **Best Presentation**, *Psychology Undergraduate Thesis Conference*, University of Guelph, Guelph, Canada.
- 2007 **Immersion Study Scholarship**, *University of Ottawa*, Ottawa, Canada.
- 2007 **Admission Scholarship \$10,000**, *University of Ottawa*, Ottawa, Canada.

## Publications

1. Tam, A., Dansereau, C., Iturria-Medina, Y., Urchs, S., Orban, P., Sharmarke, H., *et al.* A highly predictive signature of cognition and brain atrophy for progression to Alzheimer's dementia. *GigaScience* **8** (2019).
2. Vogel, J. W., Vachon-Preseu, E., Binette, A. P., Tam, A., Orban, P., Joie, R. L., *et al.* Brain properties predict proximity to symptom onset in sporadic Alzheimer's disease. *Brain* **141**, 1871–1883 (2018).
3. Badhwar, A., Tam, A., Dansereau, C., Orban, P., Hoffstaedter, F. & Bellec, P. Resting-state network dysfunction in Alzheimer's disease: A systematic review and meta-analysis. *Alzheimers Dementia Diagnosis, Assessment Disease Monitoring* **8**, 73–85 (2017).
4. Dansereau, C., Tam, A., Badhwar, A., Urchs, S., Orban, P., Rosa-Neto, P. & Bellec, P. A brain signature highly predictive of future progression to Alzheimer's dementia. *arXiv preprint arXiv:1712.08058* (2017).
5. Orban, P., Tam, A., Urchs, S., Savard, M., Madjar, C., Badhwar, A., *et al.* Subtypes of functional brain connectivity as early markers of neurodegeneration in Alzheimer's disease. *bioRxiv*, 195164 (2017).
6. Reginold, W., Itorralba, J., Tam, A., Luedke, A. C., Fernandez-Ruiz, J., Reginold, J., Islam, O. & Garcia, A. Correlating quantitative tractography at 3T MRI and cognitive tests in healthy older adults. *Brain Imaging and Behavior* **10**, 1223–1230 (2016).
7. Tam, A., Dansereau, C., Badhwar, A., Orban, P., Belleville, S., Chertkow, H., *et al.* A dataset of multiresolution functional brain parcellations in an elderly population with no or mild cognitive impairment. *Data in Brief* **9**, 1122–1129 (2016).
8. Orban, P., Madjar, C., Savard, M., Dansereau, C., Tam, A., Das, S., *et al.* Test-retest resting-state fMRI in healthy elderly persons with a family history of Alzheimer's disease. *Scientific Data* **2**, 1–11 (2015).
9. Reginold, W., Luedke, A. C., Tam, A., Itorralba, J., Fernandez-Ruiz, J., Reginold, J., Islam, O. & Garcia, A. Cognitive Function and 3-Tesla Magnetic Resonance Imaging Tractography of White Matter Hyperintensities in Elderly Persons. *Dementia and geriatric cognitive disorders extra* **5**, 387–394 (2015).
10. Tam, A., Dansereau, C., Badhwar, A., Orban, P., Belleville, S., Chertkow, H., *et al.* Common Effects of Amnesic Mild Cognitive Impairment on Resting-State Connectivity Across Four Independent Studies. *Frontiers in Aging Neuroscience* **7**, 2214–2266 (2015).
11. Tam, A., Luedke, A. C., Walsh, J. J., Fernandez-Ruiz, J. & Garcia, A. Effects of reaction time variability and age on brain activity during Stroop task performance. *Brain Imaging and Behavior* **9**, 609–618 (2015).

12. \*Ruthirakuhan, M., \*Luedke, A. C., \*Tam, A., Goel, A., Kurji, A. & Garcia, A. Use of physical and intellectual activities and socialization in the management of cognitive decline of aging and in dementia: A review. *Journal of Aging Research* **2012** (2012).

\* Authors contributed equally.

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## Conference Presentations

### Oral Presentations

- 2016 **Common effects of amnesic mild cognitive impairment on resting-state connectivity across four independent studies.**  
Conference: Douglas Research Centre Best Student Paper Competition  
Location: Montreal, Canada
- 2015 **Consistent inter-protocol differences in resting-state functional connectomes between normal aging and mild cognitive impairment.**  
Conference: International Training Programme in Ageing  
Location: Dublin, Ireland
- 2011 **The effects of aging and sleep quality on location and distance-based processes in memory for when something happened.**  
Conference: Psychology Undergraduate Thesis Conference  
Location: Guelph, Canada

### Poster Presentations

- 2019 **Pre-screening machine learning model for beta-amyloid positive enrichment.**  
Dansereau, C., Tam, A., Rosa-Neto, P., Gauthier, S., Bellec, P.  
Conference: Alzheimer's Association International Conference  
Location: Los Angeles, USA
- 2018 **A highly predictive signature of cognition and brain atrophy for progression to Alzheimer's dementia.**  
Tam, A., Dansereau, C., Iturria-Medina, Y., Urchs, S., Orban, P., Breitner, J., and Bellec, P.  
Conference: Canadian Consortium on Neurodegeneration in Aging  
Location: Montreal, Canada
- 2018 **A signature of brain atrophy is highly predictive of progression to Alzheimer's dementia and cognitive decline.**  
Tam, A., Dansereau, C., Iturria-Medina, Y., Urchs, S., Orban, P., Breitner, J., and Bellec, P.  
Conference: Alzheimer's Association International Conference  
Location: Chicago, USA
- 2017 **Multimodal identification of a brain biotype highly predictive of future progression to Alzheimer's dementia.**  
Dansereau, C., Tam, A., Badhwar, A., Urchs, S., Orban, P., Rosa-Neto, P., Bellec, P.  
Conference: Alzheimer's Association International Conference  
Location: London, UK
- 2016 **Resting-state network dysfunction in Alzheimer's disease: A systematic review and meta-analysis.**  
Badhwar, A., Tam, A., Dansereau, C., Orban, P., Toro, R., Bellec, P.  
Conference: Alzheimer's Association International Conference  
Location: Toronto, Canada

- 2016 **Regional gray matter volume and default mode network connectivity are associated with age relative to parental symptom onset in sporadic Alzheimer's disease.**  
 Vogel, J.W., Orban, P., Pichet Binette, A., La Joie, R., Savard, M., Tam, A., Breitner, J.C.S., Bellec, P., Villeneuve, S., PREVENT-AD Research Group  
 Conference: Alzheimer's Association International Conference  
 Location: Toronto, Canada
- 2015 **Functional brain network subtypes are associated with Alzheimer's disease biomarkers in an aging, high-risk, cognitively normal cohort: The Prevent-AD Alzheimer's disease study.**  
 Orban, P., Urchs, S., Savard, S., Madjar, C., Tam, A., Theroux, L., Evans, A.C., Rosa-Neto, P., Collins, D.L., Poirier, J., Breitner, J.C.S., Bellec, P., PREVENT-AD Research Group  
 Conference: Alzheimer's Association International Conference  
 Location: Washington D.C., USA
- 2015 **Multisite study of robust resting-state fMRI differences in normal aging & mild cognitive impairment.**  
 Tam, A., Dansereau, C., Badhwar, A., Orban, P., Belleville, S., Chertkow, H., Dagher, A., Hanganu, A., Monchi, O., Rosa-Neto, P., Shmuel, A., Breitner, J., Bellec, P.  
 Conference: Human Brain Mapping  
 Location: Honolulu, USA
- 2014 **Connectome-wide analysis of differences between normal aging, mild cognitive impairment, and dementia of the Alzheimer's type using resting-state fmri connectivity.**  
 Tam, A., Dansereau, C., Badhwar, A., Orban, P., Belleville, S., Chertkow, H., Dagher, A., Hanganu, A., Monchi, O., Rosa-Neto, P., Shmuel, A., Breitner, J., Bellec, P.  
 Conference: Alzheimer's Association International Conference  
 Location: Copenhagen, Denmark
- 2014 **Resting-state fMRI connectivity differences between normal aging, mild cognitive impairment and dementia of the Alzheimer's type.**  
 Tam, A., Dansereau, C., Badhwar, A., Orban, P., Belleville, S., Chertkow, H., Dagher, A., Hanganu, A., Monchi, O., Rosa-Neto, P., Shmuel, A., Breitner, J., Bellec, P.  
 Conference: Canadian Alzheimer's Disease Research Symposium  
 Location: Quebec City, Canada
- 2013 **fMRI study of attentional lapses across aging.**  
 Tam, A., Luedke, A.C., Walsh, J.J., Fernandez-Ruiz, J., Garcia, A.  
 Conference: Canadian Conference on Dementia  
 Location: Vancouver, Canada
- 2012 **An fMRI study of attention modulation in the elderly.**  
 Tam, A., Luedke, A.C., Walsh, J.J., Fernandez-Ruiz, J., Garcia, A.  
 Conference: Society for Neuroscience  
 Location: New Orleans, USA
- 2012 **Selective Attention in the Elderly: An fMRI Study.**  
 Tam, A., Luedke, A.C., Walsh, J.J., Fernandez-Ruiz, J., Garcia, A.  
 Conference: Canadian Society for Brain, Behaviour and Cognitive Science  
 Location: Kingston, Canada
- 2012 **Neural Substrates Underlying Selective Attention in a Stroop Task.**  
 Tam, A., Luedke, A.C., Fernandez-Ruiz, J., Garcia, A.  
 Conference: Canadian Society for Brain, Behaviour and Cognitive Science  
 Location: Kingston, Canada