

# Curriculum Vitae

Julie Winterburn

## A. Date Curriculum Vitae is Prepared: September 2014

## B. Biographical Information

Mailing Address 55 Edenvale Cr.  
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### 1. EDUCATION

Sept. 2013-Present MSc, Institute for Biomaterials and Biomedical Engineering, University of Toronto, Toronto, ON, Canada. Supervisor: Dr. Mallar Chakravarty, Using computational neuroanatomy and magnetic resonance imaging to develop a prodromal classifier for schizophrenia

2007-2011 BSc, Engineering Chemistry, Queen's University, Kingston, ON, Canada. Supervisor: Dr. Nick Mosey, Development of Reaction Metrics for Temporal Quantum Mechanics/Molecular Mechanics (QM/MM) Simulations

### 2. HONOURS AND AWARDS

Sept. 2014 **SCACE Graduate Fellowship in Alzheimer's Research**, University of Toronto, Faculty of Medicine, \$4,100

Sept. 2014 **Dalton Whitebread Scholarship Fund**, University of Toronto, Faculty of Medicine, \$2,000

Sept. 2014 – Aug. 2015 **Studentship**, Provided by supervisor, \$19,900

June 2014 **Award for Best Lightning Round Presentation**, Institute for Biomaterials and Biomedical Engineering Scientific Day, \$100

Sept. 2013 – Aug. 2014 **U of T Fellowship- Biomedical Engineering**, University of Toronto, \$11,000

Sept. 2013 – Aug. 2014 **Studentship**, Provided by supervisor, \$15,000

Sept. 2013 – Dec. 2013 **SGS Conference Grant**, University of Toronto, \$500

May 2010 – Aug. 2010 **Centennial International Exchange Award**, Queen's University, \$1,000

2007 – 2009 **Principal's Scholarship**, Queen's University, \$10,000

2007 – 2008 **Distinguished Alumni Achievement Entrance Scholarship**, Queen's University, \$2000

### 3. PEER REVIEWED PUBLICATIONS

1. Park, M. T. Pipitone, J., Baer, L., **Winterburn, J.L.**, Shah, Y., Chavez, S., Schira, M.M., Lobaugh, N.J., Lerch, J.P., Voineskos, A.N., Chakravarty, M. M. (2014). *Segmentation of cerebellum and cerebellar lobules with multiple automatically generated templates*. NeuroImage. 10.1016/j.neuroimage.2014.03.037.
2. Pipitone, J.P., Park, M.T., **Winterburn, J.L.**, Lett, T.A, Lerch, J.P., Pruessner, J.C., Lepage, M., Voineskos, A.N., Chakravarty, M. M., and the Alzheimer's Disease Neuroimaging Initiative. (2014). *Multi-atlas Segmentation of the Whole Hippocampus and Subfields Using Multiple Automatically Generated Templates*. NeuroImage. 10.1016/j.neuroimage.2014.04.054.

3. **Winterburn, J. L.**, Pruessner, J. C., Chavez, S., Schira, M., Lobaugh, N. J., Voineskos, A. N., Chakravarty, M. M. (2013). *A novel in vivo atlas of human hippocampal subfields using high-resolution 3T magnetic resonance imaging*. *NeuroImage*. 10.1016/j.neuroimage.2013.02.003.

#### 4. NON-PEER REVIEWED PUBLICATIONS AND PUBLISHED CONFERENCE PROCEEDINGS

1. **Winterburn, J.L.**, Pruessner, J.C., Chavez, S., Schira, M.M., Lobaugh, N.J., Voineskos, A.N., Chakravarty, M.M (under review). *High-resolution in vivo acquisition sequence and manual segmentation protocol for human hippocampal subfields using 3T magnetic resonance imaging*. *Journal of Visualized Experiments*.
2. **Winterburn, J.L.**, Voineskos, A.N., Chakravarty, M.M (in preparation). *Age, hippocampal morphology, and memory performance across the adult lifespan*.
3. Guo, T., **Winterburn, J.L.**, Pipitone, J., Park, M.T., Duerden, E.G., Chau, V., Poskitt, K.J., Grunau, R.E., Synnes, A., Miller, S.P., Chakravarty, M.M. (in preparation) *Segmentation of Hippocampus for Preterm-born Neonates*.

#### 5. RESEARCH, TEACHING AND EMPLOYMENT

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|-----------------------|--|
| Jan. 2012 – Aug. 2013 | <p>Research Assistant, Centre for Addiction and Mental Health, Toronto, Canada</p> <ul style="list-style-type: none"> <li>• Developed new protocol for identifying brain structures on magnetic resonance images</li> <li>• Results published in <b>NeuroImage (2013)</b> and method currently in use internationally (UCLA; Max Planck Institute, Germany)</li> <li>• Recruited based on excellent performance at Hospital for Sick Children</li> <li>• Assisted with laboratory operations and finances; helped submit major grant applications</li> </ul> |
| May 2011 – Dec. 2011  | <p>Research Intern, Hospital for Sick Children, Toronto, Canada</p> <ul style="list-style-type: none"> <li>• Analyzed learning and memory techniques in healthy rodents using magnetic resonance imaging and advanced image analysis</li> <li>• Proposed and implemented new project on learning patterns in a mouse model of dementia</li> </ul>  |
| May 2010 – Aug. 2010  | <p>Engineering Intern, Johannes Kepler Universität, Linz, Austria</p> <ul style="list-style-type: none"> <li>• Selected to represent Canada abroad as intern in international engineering program (on scholarship)</li> <li>• Tested physical properties of polymers under various environmental stresses</li> </ul>   |
| Jan 2009 – Apr. 2010  | <p>Teaching Assistant, Department of Chemistry, Queen's University, Kingston, Canada</p> <ul style="list-style-type: none"> <li>• Marked and provided feedback on quizzes, midterms, and final examinations</li> <li>• Participated in and helped pioneer development program for TAs aimed at improving the quality of TA instruction</li> </ul>  |

#### 6. PRESENTATIONS

##### Oral Presentations

1. **Winterburn, J. L.**, Bhagwat, N., Voineskos, A.N., Chakravarty, M.M. (2014) *Comparison of techniques for classification of patients with schizophrenia and healthy controls based on cortical thickness*. 40<sup>th</sup> Annual Harvey Stancer Research Day, Department of Psychiatry, University of Toronto. Toronto, Canada. *Accepted for platform presentation*.

2. **Winterburn, J. L.**, Bhagwat, N., Voineskos, A. N., Chakravarty, M. M. (2014). *Comparison of techniques for classification of patients with schizophrenia and healthy controls based on cortical thickness*. Institute for Biomaterials and Biomedical Engineering Scientific Day, University of Toronto, Toronto, Canada. *Accepted for platform presentation*.
3. **Winterburn, J.L.**, Pruessner, J. C., Pipitone, J., Chavez, S., Schira, M., Lobaugh, N. J., Voineskos, A. N., Chakravarty, M. M. (2013). *Manual and automated hippocampal subfield segmentation on 3T scans*. Hippocampal Subfield Segmentation Summit (HS3), University of California, Davis. Davis, California. *Accepted for platform presentation*.
4. **Winterburn, J. L.**, Pipitone, J., Voineskos, A. N., Chakravarty, M. M. (2013). *Volumetric and morphometric characterization of the hippocampus in schizophrenia*. 39<sup>th</sup> Annual Harvey Stancer Reseach Day, Department of Psychiatry, University of Toronto. Toronto, Canada. *Accepted for platform presentation*.
5. **Winterburn, J.L.**, Pipitone, J. (2013). *Automated segmentation of hippocampal subfields in MR images*. Research Imaging Centre Rounds, Centre for Addiction and Mental Health. Toronto, Canada. *Oral presentation*.
6. **Winterburn, J. L.**, Pruessner, J. C., Pipitone, J., Chavez, S., Schira, M., Lobaugh, N. J., Voineskos, A. N., Chakravarty, M. M. (2012). *A novel in vivo atlas of human hippocampal subfields using high-resolution magnetic resonance imaging*. Society for Neuroscience Annual Meeting. New Orleans, USA. *Accepted for platform presentation*.
7. **Winterburn, J. L.**, Chavez, S., Schira M., Lobaugh, N., Voineskos, A. N., Chakravarty, M. M. (2012). *A novel in vivo atlas of human hippocampal subfields using high-resolution magnetic resonance imaging*. 38<sup>th</sup> Annual Harvey Stancer Research Day, Department of Psychiatry, University of Toronto. Toronto, Canada. *Accepted for platform presentation*.

#### Conference Abstracts

1. Amaral, R.S.C., Park, M.T., Pipitone, J.P., **Winterburn, J.L.**, Chavez, S., Schira, M., Lobaugh, N., Voineskos, A.N., Chakravarty, M.M., and the Alzheimer's Disease Neuroimaging Initiative. (2014). *Mapping the memory circuit: manual segmentation of fornix, fimbria and alveus on high-resolution 3T MRI and automated segmentation in Alzheimer's disease*. 20<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping, Hamburg, Germany. *Accepted for poster presentation*.
2. Guo, T., **Winterburn, J.L.**, Pipitone, J.P., Duerden, E.G., Chau, V., Poskitt, K.J., Grunau, R.E., Synnes, A., Miller, S.P., Chakravarty, M.M. (2014). *Segmentation of Hippocampus in Early-in-Life and Term-Equivalent Images of Preterm-born Neonates*. 20<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping, Hamburg, Germany. *Accepted for poster presentation*.
3. Duerden, E.G., Guo, T., **Winterburn, J.L.**, Pipitone, J., Chakravarty, M.M., Chau, V., Poskitt, K.J., Grunau, R.E., Synnes, A., Miller, S.P. (2014). *Hippocampal Segmentation in Preterm Born Infants Postnatally Exposed to Steroids*. Proceedings of the 20<sup>th</sup> 20<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping, Hamburg, Germany. *Accepted for poster presentation*.
3. Guo, T., **Winterburn, J.L.**, Pipitone, J.P., Chakravarty, M.M., Duerden, E.G., Chau, V., Poskitt, K.J., Grunau, R.E., Synnes, A., Miller, S.P.. (2014). *Hippocampal Growth in Preterm Neonates: role of postnatal steroids*. Proceedings of the Pediatric Academic Societies Annual Meeting, Vancouver, BC, Canada. *Accepted for poster presentation*.
4. Pipitone, J., **Winterburn, J. L.**, Lerch, J. P., Voineskos, A. N., Chakravarty, M. M. and Alzheimer's Disease Neurimaging Initiative. (2013). *Bootstrapping Multi-Atlas Hippocampal Segmentation: MAGE<sub>T</sub> Brain*. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping. Seattle, USA. *Presented poster as 2<sup>nd</sup> author*.

5. Park, M. T. Pipitone, J., Baer, L., **Winterburn, J.**, Shah, Y., Lerch, J., Voineskos, A., Chakravarty, M. M. (2013). *Segmentation of cerebellum and cerebellar lobules with multiple automatically generated templates*. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping. Seattle, USA. *Accepted for poster presentation*.
6. Lerch, J., Lin, S., Calcott, R., Konishi, K., Germann, J., Pipitone, J., **Winterburn, J.**, Chakravarty, M., Bohbot, V. (2013). *Anatomical development of hippocampus and striatum predict spontaneous navigation strategy*. 19<sup>th</sup> Annual Meeting of the Organization for Human Brain Mapping. Seattle, USA. *Accepted for poster presentation*.
7. Pipitone, J., **Winterburn, J.L.**, Lerch, J.P., Voineskos, A.N., Chakravarty, M.M. and Alzheimer's Disease Neuroimaging Initiative. (2013). *An analysis of automated hippocampal segmentation accuracy in Alzheimer's disease*. 36<sup>th</sup> Annual Meeting of the Canadian College of Neuropsychopharmacology. Toronto, Canada. *Accepted for poster presentation*.
8. Germann, J., Chiu, T., **Winterburn, J.**, Henkleman, R. M., Lerch, J. P. (2012). Learning a spatial maze induces local structural changes in adult mouse brains but success equally depends on pre-existing anatomical differences. Imaging Network of Ontario Symposium. Toronto, Canada. *Accepted for poster presentation*.
9. **Winterburn, J. L.**, Cahill, L., Lerch, J., & Sled, J. (2011). *Characterization of a mouse model of neurodegenerative disease: imaging and behavioural studies*. SickKids Summer Research Symposium, Hospital for Sick Children. Toronto, Canada. *Accepted for poster presentation*.

## 7. PATENTS

No patents to date.

## 8. EXTRACURRICULAR ACTIVITIES

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|----------------------|---|
| Apr. 2014            | Volunteer Bike Courier, Macarons in Motion <ul style="list-style-type: none"> <li>• Home delivery of baked goods across Toronto; profits donated to Hospital for Sick Children</li> </ul>                         |
| 2004 – Present       | Volunteer with Kingsway Lambton United Church <ul style="list-style-type: none"> <li>• Assist with various community outreach and charity events (flea market, golf tournament)</li> </ul>                        |
| Sept. 2013 – Present | UofT Varsity Rowing Team <ul style="list-style-type: none"> <li>• Active member of team; participate in and help organize fundraising and team building events; recipient of MVP award for 2013 season</li> </ul> |