Taylor W. Schmitz
Curriculum Vitae

Lab website
INCAlab
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Work address
University of Western Ontario
Perth Drive, WIRB 4112
London, ON N6A 3K7 Canada

EDUCATION

2008 – 2012 **Ph.D. (Psychology, Collaborative Program in Neuroscience)**
University of Toronto, Toronto, ON, Canada

2006 – 2008 **M.A. (Psychology, Collaborative Program in Neuroscience)**
University of Toronto, Toronto, ON, Canada

1998 – 2002 **B.Sc. Honors (Psychology)**
University of Wisconsin, Madison, WI, USA

POSITIONS HELD

2020 – **Associate Scientist**
Robarts Research Institute, Western University, London, ON, Canada
Associate Scientist
Lawson Health Research Institute, St. Joseph's Hospital, London, ON, Canada

2019 – **Adjunct Professor of Research**
Department of Physiology and Pharmacology, Western University, London, ON, Canada
Research Scientist
Brain and Mind Institute, Western University, London, ON, Canada

2017 – 2018 **Research Scientist**
Montreal Neurological Institute, McGill University, Montreal, QC, Canada

2015 – 2017 **Research Fellow**
Wolfson College, University of Cambridge, Cambridge, Cambridgeshire, UK

2012 – 2016 **Medical Research Council Postdoctoral Fellow**
Cognition and Brain Sciences Unit, Cambridge, Cambridgeshire, UK

2002 –2006 **Research Specialist**
University of Wisconsin Medical School / VA Medical Center, Madison, WI, USA

GRANTS

2021 – **Canadian Institutes of Health Research**
Program Grant
Role: PI
Linking preclinical mechanisms of neurodegeneration to individual risk profiles of Alzheimer's disease.
$1,044,225 CAD

2020 – **Western Seed Grant**
Seed Grant
Role: PI

Molecular imaging of the cholinergic projection system in mice.
$19,646 CAD

2019 – 2023 **Natural Sciences and Engineering Research Council of Canada**
Discovery Grant
Role: PI
Integrating the neural and biochemical basis of attention in humans.
$225,000 CAD

2018 – 2019 **National Institute on Aging**
R03 AG060263
Role: co-PI
In vivo staging of preclinical Alzheimer's disease progression.
$100,000 USD

2018 – 2020 **Healthy Brains for Healthy Lives, Canada First Research Excellence Fund**
Innovative Ideas Program
Role: Co-Investigator
In vivo cholinergic markers of preclinical Alzheimer's disease progression.
$169,952 CAD

2017 **Pfizer**
Pfizer Scientific Services Evaluation Agreement
Role: Co-Investigator
Cholinergic biomarkers of preclinical Alzheimer Disease progression: a replication study.
$130,000 USD

FELLOWSHIPS AND AWARDS

2019 **NSERC Discovery Accelerator Supplement**
$120,000 CAD

2019 **NSERC Discovery Launch Supplement**
$12,500 CAD

2019 **International Society of Neurochemistry – Young Scientist Lectureship Award**

2016 **Guarantors of Brain – Travel Award**
£800

2014 – 2016 **Medical Research Council Special Awards Scheme**
£2,240

2013 – 2016 **Medical Research Council Postdoctoral Fellowship**
£117,824

2013 **Governor General's Academic Gold Medal**

2009 – 2012 **Vanier NSERC Scholarship**
$150,000 CAD

2009 **Ontario Graduate Scholarship (Declined)**
$15,000 CAD

2008 **University of Toronto Neuroscience Program Travel Award**
$500 CAD

2007 **Ontario Graduate Scholarship**
$15,000 CAD

GRADUATE MENTORSHIP

University of Western Ontario

2021 – **Bahaaldin Helal, BSc**
Role: MSc primary supervisor
Project: Predictive phenotyping of Parkinson's disease from multifactor biomarker and neuroimaging data.
Awards held in INCAlab: DUROP, BrainsCAN Graduate Studentship Award

2020 – **Hayley Shanks, BSc**
Role: MSc primary supervisor
Project: Selective neuronal vulnerability of the cholinergic system: The role of lipid dysregulation.
Awards held in INCAlab: NSERC USRA, Ontario Graduate Scholarship, Alzheimer Foundation London and Middlesex Masters Scholarship, Canadian Institutes of Health Research: Frederick Banting and Charles Best Canada Graduate Scholarship

2020 – **Neuroscience Graduate Program (PhD primary supervision membership)**

2020 – **Reebal Rafeh, MSc**
Role: PhD primary supervisor with co-supervisor Marieke Mur
Project: Integrating the neural and biochemical basis of attention in humans.

2020 – **Kate Onuska, MSc**
Role: PhD primary supervisor with co-supervisor Marco Prado
Project: A high throughput in vivo mouse imaging platform for quantifying cholinergic neurodegeneration in preclinical Alzheimer's disease.
Awards held in INCAlab: Best Presentation Robarts Retreat, Graduate Neuroscience Program Travel Award

2019 – **Sudesna Chakraborty, MSc**
Role: PhD co-supervisor with Ali Khan (primary)
Project: Mapping the cholinergic projection system in humans with multimodal in vivo neuroimaging.

2017 – 2020 **Sara Fernández-Cabello, PhD**
Role: PhD co-supervisor with Martin Kronbichler (primary)
Project: Predictive pathological staging of Alzheimer's disease.

University of Cambridge

2014 – 2017 **Yuhua Guo, PhD**
Role: Post-doctoral mentor
Project title: Involvement of the basal ganglia in memory and motor inhibition: meta-analytic evidence.

2013 – 2015 **Catarina Ferreira, PhD**
Role: Post-doctoral mentor
Project title: A supramodal inhibition process supports the inhibition of motor action and memory retrieval.

UNDERGRADUATE MENTORSHIP

University of Western Ontario

2020 – 2021 **Aleksandar Radman**
Role: Primary supervisor (4980 Honors thesis)
Project: Transcriptomic Analysis of Vulnerable Cell Types in Alzheimer's Disease

2020 – 2021 **Lauren Devito**
Role: Primary supervisor (4980 Honors thesis)
Project: Structural and molecular imaging of the mouse cholinergic system

2020 – **Sun Kyun Lee**
Role: Primary supervisor (USRI)
Project: Cholinergic modulation of task-related BOLD response: Meta-analytic evidence from pharmacological fMRI.

2019 – 2020 **Hayley Shanks**
Role: Primary supervisor (4980 Honors thesis)
Project: Plasma phosphatidylcholines are associated with the longitudinal grey matter integrity of the basal forebrain in Alzheimer's disease.

2019 – 2020 **Justin Lee**
Role: Primary supervisor (4980 Honors thesis)
Project: Predictive pathological staging of Alzheimer's disease.

University of Toronto

2012 **Lev Tankelevitch**
Role: Co-supervision Honors Thesis
Project title: Perceptual attention in aging: An eye-tracking study

2011 **Nassim Collishaw**
Role: Co-supervision Honors Thesis
Thesis title: Dissociating the influences of predictive coding and feature-based attention during object perception

LECTURING

University of Western Ontario

2020 – **Pharmacology 4380B - Neuropharmacology of Central Synaptic Transmission**
Role: Co-instructor

University of Cambridge

2016 **Experimental Psychology**
Role: Guest Lecturer

2015 **Functional MRI Methods**
Role: Workshop Developer

PEER REVIEWED ARTICLES (*supervised trainees; *h*-index = 24)

30. **Schmitz TW** & Zaborszky L (2021). Spatial topography of the basal forebrain cholinergic projections: Organization and vulnerability to degeneration. In: *Handbook of Clinical Neurology* (Swaab DF, Keier F, Lucassen PJ, Salehi A, Buijs RM, eds): Elsevier.

29. Apšvalka D, Ferreira CS*, **Schmitz TW**, Rowe JB, Anderson MC (2020). Dynamic targeting enables domain-general inhibitory control over action and thought by the prefrontal cortex. *BioRxiv*, doi: https://doi.org/10.1101/2020.10.22.350520

28. Fernández-Cabello S*, Kronbichler M, Van Dijk KRA, Goodman JA, Spreng RN, **Schmitz TW** (2020). Basal forebrain volume reliably predicts the cortical spread of Alzheimer's degeneration. *Brain,* 143, 993-1009.

27. **Schmitz TW**, Soreq H, Poirier J, Spreng RN (2020). Longitudinal basal forebrain degeneration interacts with TREM2/C3 biomarkers of inflammation in pre-symptomatic Alzheimer's disease. *Journal of Neuroscience*, 40, 1931-1942.

26. **Schmitz TW**, Mur M, Aghourian M, Bédard M-A, Spreng RN (2018). Longitudinal Alzheimer's degeneration reflects the spatial topography of cholinergic basal forebrain projections. *Cell Reports*, 24, 38-46

25. **Schmitz TW**, Duncan J (2018). Normalization and the cholinergic microcircuit: A unified basis for attention. *Trends in Cognitive Sciences*, 22, 422-437.

24. Guo Y*, **Schmitz TW**, Mur M, Ferreira CS*, Anderson, MC (2018). A Supramodal Role of the Basal Ganglia in Memory and Motor Inhibition: Meta-Analytic Evidence. *Neuropsychologia*, 108, 117-134.

23. **Schmitz TW,** Correia MM, Ferreira CS*, Prescot AP, Anderson, MC (2017). Hippocampal GABA enables inhibitory control over unwanted thought. *Nature Communications*, 8, 1311.

22. **Schmitz TW**, Spreng RN (2016). Basal forebrain degeneration precedes and predicts the cortical spread of Alzheimer's pathology. *Nature Communications*, 7, 13249.

21. **Schmitz TW**, Dixon ML*, Anderson AK, De Rosa E (2014). Distinguishing attentional gain and tuning in young and older adults. *Neurobiology of Aging*, 35, 2514-25.

20. Charest I, Kievit RA, **Schmitz TW**, Deca D, Kriegeskorte, N (2014). Unique semantic space in the brain of each beholder predicts perceived similarity. *PNAS*, 111, 14565-70.

19. Todd RM, **Schmitz TW**, Susskind JM, Anderson AK (2013). Shared neural substrates of emotionally enhanced perceptual and mnemonic vividness. *Frontiers in behavioral neuroscience*, 7, 40.

18. Todd RM, Talmi D, **Schmitz TW**, Susskind JM, Anderson AK (2012). Psychophysical and neural evidence for emotion-enhanced perceptual vividness. *Journal of Neuroscience*, 32, 11201-12.

17. Menon M, **Schmitz TW**, Anderson AK, Graff A, Korostil M, Mamo D, Gerretsen P, Addington J, Remington G, Kapur S. (2011). Exploring the neural correlates of delusions of reference. *Biological Psychiatry,* 70, 1127-33.

16. **Schmitz TW**, Cheng FH*, De Rosa E (2010). Failing to ignore: paradoxical neural effects of perceptual load on early attentional selection in normal aging. *Journal of Neuroscience*, 30, 14750-8.

15. **Schmitz TW**, De Rosa E, Anderson AK (2009). Opposing influences of affective state valence on visual cortical encoding. *Journal of Neuroscience*, 29, 7199-207.

14. Trivedi MA, **Schmitz TW**, Ries ML, Hess TM, Fitzgerald ME, Atwood CS, Rowley HA, Asthana S, Sager MA, Johnson SC (2008). FMRI activation during episodic encoding and metacognitive appraisal across the lifespan: risk factors for Alzheimer's disease*. Neuropsychologia*, 46, 1667-78.

13. Johnson SC, **Schmitz TW**, Asthana S, Gluck MA, Myers C (2008). Associative Learning Over Trials Activates the Hippocampus in Healthy Elderly but not Mild Cognitive Impairment. *Aging, Neuropsychology, and Cognition,* 15, 129-45.

12**.** Ries ML, Jabbar BM, **Schmitz TW**, Trivedi MA, Gleason CE, Carlsson CM, Rowley HA, Asthana S, Johnson SC (2007). Anosognosia in mild cognitive impairment: Relationship to activation of cortical midline structures involved in self-appraisal. *JINS*, 13, 450-61

11. **Schmitz TW**, Johnson SC (2007). Relevance to self: A brief review and framework of neural systems underlying appraisal. *Neuroscience and Biobehavioral Reviews*, 31, 585-96.

10. Trivedi MA, Wichmann AK, Torgerson BM, Ward MA, **Schmitz TW**, Ries ML, Koscik RL, Asthana S, Johnson SC (2006). Structural MRI discriminates individuals with Mild Cognitive

Impairment from age-matched controls: A combined neuropsychological and voxel based morphometry study. *Alzheimer's and Dementia*, 2, 296-302.

9. Gleason CE**, Schmitz TW**, Hess T, Koscik RL, Trivedi MA, Ries ML, Carlsson CM, Sager MA, Asthana S, Johnson SC (2006). Hormone effects on fMRI and cognitive measures of encoding: importance of hormone preparation. *Neurology*, 67, 2039-41.

8. Johnson SC**, Schmitz TW**, Trivedi MA, Ries ML, Torgerson BM, Carlsson CM, Asthana S, Hermann BP, Sager MA (2006). The influence of Alzheimer disease family history and apolipoprotein E epsilon4 on mesial temporal lobe activation *Journal of Neuroscience*, 26, 6069-6076.

7. Trivedi MA, **Schmitz TW**, Kawahara-Baccus TN, Ries ML, Sager MA, Hermann BP, Asthana S, Johnson SC (2006). Reduced hippocampal activation during episodic encoding in middle-aged individuals at genetic risk for Alzheimer's Disease: a cross-sectional study. *BMC Medicine*, 4, open access.

6. **Schmitz TW**, Johnson SC (2006). Self-appraisal decisions evoke dissociated dorsal—ventral aMPFC networks. *Neuroimage,* 15, 1050-1058

5. Johnson SC, **Schmitz TW**, Moritz CH, Meyerand ME, Rowley HA, Alexander AL, Hansen KW, Gleason CE, Carlsson CM, Ries ML, Asthana S, Chen K, Reiman EM, Alexander GE (2006). Activation of Brain Regions Vulnerable to Alzheimer's Disease: The Effect of Mild Cognitive Impairment. *Neurobiology of Aging,* 27, 1604-1612.

4. **Schmitz TW**, Rowley HR, Kawahara-Baccus TN, Johnson SC (2006). Neural correlates of self-evaluative accuracy after traumatic brain injury. *Neuropsychologia,* 44, 762-773.

3. Ries ML, **Schmitz TW**, Kawahara-Baccus TN, Torgerson BM, Trivedi MA, Johnson SC (2006). Task-dependent posterior cingulate activation in mild cognitive impairment. *Neuroimage* 29, 485-492.

2. Johnson SC, **Schmitz TW**, Kawahara-Baccus TN, Rowley HR, Alexander AL, Lee J, Davidson RJ (2005). The Cerebral Response During Subjective Choice With and Without Self-Reference. *Journal of Cognitive Neuroscience,* 17, 1897-1906.

1. **Schmitz TW**, Kawahara-Baccus TN, Johnson SC (2004). Metacognitive evaluation, self-relevance, and the right prefrontal cortex. *Neuroimage, 22*, 941-947.

FORTHCOMING ARTICLES (*supervised trainees)

4. Shanks HRC*, Barupal DK, Meikle PJ, Kaddurah-Daouk RF, **Schmitz TW** (in prep). Plasma phosphatidylcholines are associated with selective longitudinal atrophy of the basal forebrain in adults at risk for Alzheimer's disease.

3. **Schmitz TW** (invited review). Imaging the cholinergic basal forebrain system: Cross-species and Clinical translation. *Journal of Neurochemistry*.

2. Fernández-Cabello S*, **Schmitz TW** (in prep). Neurodegenerative spreading from basal forebrain to entorhinal cortex predicts memory function in Alzheimer's disease.

1. Lee T*, Arnold S*, Chakraborty S*, Gupta G, Mur M, **Schmitz TW** (in prep). Opposing pathways of cholinergic cortical modulation.

INVITED TALKS (*supervised trainees)

36. Shanks HRC*, **Schmitz TW** (2021). Serum phosphatidylcholine selectively predicts longitudinal basal forebrain degeneration in Alzheimer's disease. AD/PD, Barcelona, Spain (virtual conference due to COVID-19).

35. **Schmitz TW** (2021). In vivo molecular imaging of cortical cholinergic denervation in preclinical Alzheimer's disease. AD/PD, Barcelona, Spain (virtual conference due to COVID-19).

34. **Schmitz TW** (2020). Testing the cholinergic anti-inflammatory hypothesis in older adults at risk for Alzheimer's disease. Joint AD meeting, Eisai Inc.

33. Fernández-Cabello S*, **Schmitz TW** (2020). Neurodegenerative spreading from basal forebrain to entorhinal cortex predicts memory function in Alzheimer's disease. AAT-AD/PD, Vienna, Austria (virtual conference due to COVID-19).

32. **Schmitz TW** (2020). Longitudinal Basal Forebrain Degeneration Interacts with TREM2/C3 Biomarkers of Inflammation in Presymptomatic Alzheimer's Disease. Symposium presenter, AAT-AD/PD, Vienna, Austria (virtual conference due to COVID-19).

31. **Schmitz TW** (2019). Trajectories of cholinergic neurodegeneration in preclinical Alzheimer's disease. 16th international Symposium on Cholinergic Mechanisms (ISCM-XVI), Weizmann Institute of Science, Rehovot, Israel.

30. Mur M, **Schmitz TW** (2019). Tracking stimulus-dependent noise correlation with human fMRI. Society for Neuroscience, Chicago, USA.

29. **Schmitz TW** (2019). The cholinergic basal forebrain: Selective neuronal vulnerability in aging and Alzheimer's disease (Young Investigator Award). International Society for Neurochemistry, Montreal, QC, Canada.

28. **Schmitz TW** (2019). Drivers of neuronal loss in clinically silent Alzheimer's disease. Neuroscience for Mental Health Seminar Series, Douglas Mental Health University Institute, Montreal, QC, Canada.

27. Fernández-Cabello S*, **Schmitz TW** (2019). Basal forebrain volume reliably predicts the cortical spread of Alzheimer's degeneration. AD/PD, Lisbon, Portugal.

26. **Schmitz TW** (2019). Proteopathy and glial reactivity drive cholinergic neurodegeneration in preclinical Alzheimer's disease. Symposium chair and presenter, AD/PD, Lisbon, Portugal.

25. **Schmitz TW** (2018). Preclinical decline of cholinergic metabolism predicts the cortical spread of Alzheimer's disease. Neurology Grand Rounds, Montreal Neurological Institute, McGill University, Montreal, QC, Canada.

24. **Schmitz TW** (2018). Advancing multi-level mechanistic models of neurodegenerative disease and cognition. University of Western Ontario, London, ON, Canada.

23. **Schmitz TW** (2018). Advancing multi-level mechanistic models of neurodegenerative disease and cognition. Montreal Neurological Institute, McGill University, Montreal, QC, Canada.

22. **Schmitz TW** (2018). Toward a multi-level mechanistic model of attention in health and disease. Brain and Mind Institute, University of Western Ontario, London, ON, Canada.

21. **Schmitz TW** (2018). Endogenous compensation for Alzheimer's neuropathology is genotype dependent. Society for Neuroscience, San Diego, USA.

20. **Schmitz TW** (2018). Cholinergic basal forebrain degeneration in aging and Alzheimer's disease. Lecture presenter, Rotman Rounds, Toronto, Canada.

19. **Schmitz TW** (2018). Triangulating cell-type specific degeneration of the cholinergic basal forebrain in preclinical Alzheimer's disease. Symposium presenter, AAT-AD/PD, Torino, Italy.

18. **Schmitz TW** (2017). Cholinergic degeneration in preclinical Alzheimer's disease: The selective neuronal vulnerability hypothesis. Feindel Brain Imaging Lecture Series, McConnell Brain Imaging Centre, McGill University, Canada.

17. **Schmitz TW** (2017). Cholinergic degeneration in preclinical Alzheimer's disease: The selective neuronal vulnerability hypothesis. Douglas Cerebral Imaging Centre lectures, Douglas Hospital, McGill University, Canada.

16. **Schmitz TW** (2017). Mapping the subcortical to cortical spread of degeneration in preclinical Alzheimer's disease. Society for Neuroscience, Washington DC, USA.

15. **Schmitz TW** (2017). Basal forebrain degeneration precedes and predicts the cortical spread of Alzheimer's pathology. Symposium presenter and co-chair, AD/PD, Vienna, Austria.

14. **Schmitz TW** (2016). Neural Mechanisms of Memory Control. Symposium presenter and co-chair, International Congress on Memory, Budapest, Hungary.

13. **Schmitz TW**, Spreng RN (2016). Basal forebrain degeneration precedes and predicts the cortical spread of Alzheimer's pathology. Society for Neuroscience, San Diego, USA.

12. **Schmitz TW** (2016). Inhibitory control of thoughts and actions: Common control processes, dissociable targets. Symposium presenter and co-chair, International Congress on Memory, Budapest, Hungary.

11. **Schmitz TW,** Ferreira CS, Guo Y, Anderson MC (2015). Cognitive control of memory and action: A within subject fMRI study. Nanosymposium presenter, Society for Neuroscience, Chicago, USA.

10. **Schmitz TW,** Ferreira CS, Guo Y, Anderson MC (2015). Cognitive control of memory and action: A within subject fMRI study. CBU Science day, Cambridge, UK.

9. **Schmitz TW,** Correia MM, Ferreira CS, Prescot AP, Anderson MC (2014). Inhibitory control over unwanted memories is mediated by hippocampal GABA. CBU Science day, Cambridge, UK.

8. **Schmitz TW** (2012). Attentional filtering in young and older adulthood. Ebbinghaus Empire Meeting, University of Toronto, Ontario, Canada.

7. **Schmitz TW**, Pun C, Ferber S, Anderson AK, De Rosa E, Ferber S (2012). Fulfilling perceptual expectations: Predictive coding dissociates feature-selective processing in the absence of visual stimuli. Nanosymposium presenter, Society for Neuroscience, New Orleans, USA.

6. **Schmitz TW**, Pun C, Ferber S, Anderson AK, De Rosa E (2011). Predictive coding and feature-based attention are dissociable cortical feedback signals for perceptual inference. Nanosymposium presenter, Society for Neuroscience, Washington DC, USA.

5. De Rosa E, Dixon ML*, Anderson AK, ***Schmitz TW** (2011). Age-related changes in top-down modulation of extrastriate cortical push-pull discriminatory signal. *Nanosymposium presenter, Society for Neuroscience, Washington DC, USA.

4. **Schmitz TW**, Dixon ML*, Anderson AK, De Rosa E (2010). Manipulations of perceptual load reveal age-related differences in extrastriate push-pull discriminatory signal. Nanosymposium presenter, Society for Neuroscience, San Diego, USA.

3. **Schmitz TW**, Dixon ML*, Anderson AK, De Rosa E (2009). The influence of physical and affective salience on visuocortical processing. Nanosymposium presenter, Society for Neuroscience, Chicago, USA.

2. **Schmitz TW**, De Rosa E, Anderson AK (2008). Emotional states differentially modulate the scope of attentional 'spotlight' in younger and older adults. Nanosymposium presenter, Society for Neuroscience, Washington DC, USA.

1. **Schmitz TW**, Cheng F*, De Rosa E (2007). Neural evidence of unintentional encoding of irrelevant information in normal ageing. Nanosymposium presenter, Society for Neuroscience, San Diego, USA.

POSTER PRESENTATIONS (*supervised trainees)

31. Shanks HRC*, Onuska KM*, Barupal, DK, & **Schmitz TW** (2021). An anatomically and biochemically specific relationship between phosphatidylcholine and basal forebrain degeneration in Alzheimer's disease. Society for Neuroscience Global Connectome (virtual conference due to COVID-19).

30. Aumont E, Onuska KM*, Rosa-Neto P, Soucy JP, Poirier J, Villeneuve S, **Schmitz TW**, Spreng RN, Bedard, MA (2020). Alterations of brain cholinergic systems in preclinical Alzheimer's disease: A PET-imaging study with [^{18}F]-FEOBV. Alzheimer's Association International Conference (virtual conference due to COVID-19).

29. Shanks HRC*, Barupal DK, **Schmitz TW** (2020). Plasma phosphatidylcholines predict the longitudinal grey-matter integrity of the basal forebrain in Alzheimer's disease. Alzheimer's Association International Conference (virtual conference due to COVID-19).

28. Onuska KM*, Prado AM, **Schmitz TW** (2020). *In vivo* molecular imaging of the mouse cholinergic projection system. Alzheimer's Association International Conference (virtual conference due to COVID-19).

27. Chakraborty S*, **Schmitz TW**, Khan AR (2020). Parcellation of the human basal forebrain based on diffusion-weighted structural connectivity data. Organization for Human Brain Mapping, Montreal (virtual conference due to COVID-19).

26. Fernández-Cabello S*, Kronbichler M, Van Dijk KRA, Goodman JA, Spreng RN, **Schmitz TW** (2019). Basal forebrain volume reliably predicts the cortical spread of Alzheimer's degeneration. Alzheimer's Association International Conference, Los Angeles, USA.

25. Guo Y*, **Schmitz TW**, Ferreira CS*, Anderson, MC (2016). Common Neural Substrates for Memory and Motor Inhibition: Meta-analytic Evidence. The International Meeting of the Psychonomic Society.

24. **Schmitz TW**, Correia M, Ferreira CS*, Prescot AP, Anderson MC (2014). Inhibitory control over unwanted memories is mediated by hippocampal GABA. Society for Neuroscience, Washington DC, USA.

23. **Schmitz TW**, Levy BJ*, Anderson MC (2013). How does inhibitory control regulate conscious awareness of a memory? Society for Neuroscience, San Diego, USA.

22. Ferreira CS*, **Schmitz TW**, Anderson MC (2013). A supramodal inhibition process supports the inhibition of motor action and memory retrieval. Society for Neuroscience, San Diego, USA.

21. **Schmitz TW** (2013). Attentional filtering in young and older adulthood. Cambridge Area Memory Meeting, Cambridge, UK.

20. **Schmitz TW**, Dixon ML*, Anderson AK, De Rosa E (2010). Attention to affective stimuli abolishes age-related susceptibility to unattended information. Organization for Human Brain Mapping, Barcelona, Spain.

19. *Dixon ML, **Schmitz TW**, De Rosa E (2009). Aging and Selective Attention: Modulating the Salience of Signal and Noise. American Psychological Association, Toronto, Canada. *Anne Anastasi Student Recognition Award.

18. **Schmitz TW**, De Rosa E, Anderson AK (2008). Positive and negative emotion alters the distribution of the attentional spotlight. Cognitive Neuroscience Society, San Francisco, USA.

17. **Schmitz TW**, Adamo M, De Rosa E (2007). Distinct frontal and posterior networks facilitate changes in selective attention to irrelevant information. Cognitive Neuroscience Society, New York City, USA.

16. **Schmitz TW,** Trivedi MA, Ries ML, Torgerson BM, Kalmoe KM, Johnson SC (2006). Age related changes in neural signature across a large N-size healthy cohort. Organization for Human Brain Mapping, Florence, Italy.

15. **Schmitz TW**, Atwood CS, Johnson SC (2005). Effective connectivity analysis of the ventral temporal lobe during novelty detection. Society for Neuroscience, Washington DC, USA

14. Johnson SC, **Schmitz TW**, Myers CE, Gluck MA (2005). Associative learning over trials activates the anterior hippocampus in healthy elderly but not mild cognitive impairment. Society for Neuroscience, Washington DC, USA

13. Gleason CE, Trivedi MA**, Schmitz TW**, Ries ML, Asthana S, Johnson SC (2005). Exposure to menopausal hormone therapy increases right hippocampal activation on a functional MRI verbal encoding task. Society for Neuroscience, Washington DC, USA.

12. Trivedi MA, **Schmitz TW**, Ries ML, Kawahara-Baccus TN, Torgerson BM, Hermann BP, Sager MA, Ward MA, Asthana S, Johnson SC (2005). The relationship between medial temporal atrophy and functional activation during memory encoding in middle-aged individuals at risk for Alzheimer's disease. Society for Neuroscience, Washington, DC.

11. Ries ML, **Schmitz TW,** Asthana S, Johnson SC (2005). Effective connectivity of the posterior cingulate cortex during episodic retrieval. Society for Neuroscience, Washington, DC.

10. **Schmitz TW**, Johnson SC (2005). Effective connectivity of neural processes underlying self-evaluation. Poster presented at Organization for Human Brain Mapping, Toronto, Canada.

9. Ries ML, **Schmitz TW**, Kawahara-Baccus TN, Torgerson BM, Trivedi MA, Johnson SC (2005). Task-dependent integrity of posterior cingulate activation in mild cognitive impairment. Organization for Human Brain Mapping, Toronto, Canada.

8. Trivedi MA, **Schmitz TW**, Kawahara-Baccus TN, Ries ML, Sager MA, Hermann BP, Asthana S, Johnson SC (2005). Reduced hippocampal activation during episodic encoding in middle-aged individuals at genetic risk for Alzheimer's Disease: a cross-sectional study. Organization for Human Brain Mapping, Toronto, Canada.

7. Pereira AA, **Schmitz TW**, Kawahara-Baccus TN, Johnson SC (2005). Hippocampal activity during encoding in persons with traumatic brain injury. International Neuropsychological Society, St. Louis, USA.

6. Johnson SC, **Schmitz TW**, Kawahara-Baccus TN, Jahn NM, Gleason CE, Carlsson CM, Sager MA, Rowley HA, Moritz CH, Meyerand ME, Asthana S (2005). MCI patients with better RAVLT Learning Performance have greater fMRI activation in the anterior hippocampus during an encoding task. 9th International Conference on Alzheimer Disease and Related Disorders, Philadelphia, USA.

5. Johnson SC, Moritz CH, Meyerand ME, **Schmitz TW**, Kawahara-Baccus TN, Rowley HA, Gleason CE, Carlsson CM, Sager MA, Asthana S (2004). The fMRI cerebral response during encoding differs between mild cognitive impairment and controls. Society for Neuroscience, San Diego, USA.

4. **Schmitz TW**, Kawahara-Baccus TN, Asthana S, Sager M, Rowley HR, Moritz CH, Johnson SC (2004). Apolipo-protein E genotype affects neural activation in the mesial temporal lobe of a cognitively normal cohort with familial history of AD. Poster presented at International Neuropsychological Society, Baltimore, USA.

3. Kawahara-Baccus TN, **Schmitz TW**, Carlsson CM, Johnson SC (2004). Do Hemoglobin and Hematocrit levels affect fMRI activation? International Neuropsychological Society, Baltimore, USA.

2. Pereira AA, **Schmitz TW**, Kawahara-Baccus TN, Johnson SC (2004). Brain activation on fMRI and visuospatial memory ability: Functional neuroanatomic correlates of BVMT-R performance. International Neuropsychological Society, Baltimore, USA.

1. Johnson SC, **Schmitz TW**, Kawahara-Baccus TN, Moritz CH, Meyerand ME (2003). Anterior Hippocampal Activation to Novel Items: A 3T MRI Study. Organization for Human Brain Mapping, New York, USA.

COMMITTEES & PROFESSIONAL ORGANIZATIONS

- The Western Integrative Neuroscience Lecture Series; TWINtalks (lead organizer)
- Canadian Brain Research Strategy Workshop for Early Career Researchers (elected member)
- AD/PD

- Alzheimer's Association
- International Society for Neurochemistry
- Society for Neuroscience
- Organization for Human Brain Mapping

AD HOC REVIEWER

- Selected journals:*Alzheimer's and Dementia*, *Brain Structure and Function*, *NeuroImage, Biological Psychiatry, Cerebral Cortex*.

PRESS COVERAGE

- 28. Fernández-Cabello S*, Kronbichler M, Van Dijk KRA, Goodman JA, Spreng RN, **Schmitz TW** (2020). Basal forebrain volume reliably predicts the cortical spread of Alzheimer's degeneration. *Brain,* 143, 993-1009.

  Altmetric: 50 | https://www.altmetric.com/details/78168472
  Alzforum coverage: https://www.alzforum.org/news/conference-coverage/does-alzheimers-start-heart-cholinergic-system

- 27. **Schmitz TW**, Soreq H, Poirier J, Spreng RN (2020). Longitudinal basal forebrain degeneration interacts with TREM2/C3 biomarkers of inflammation in pre-symptomatic Alzheimer's disease. *Journal of Neuroscience*, 40, 1931-1942.

  Altmetric: 27| https://www.altmetric.com/details/73769821
  Alzforum coverage: https://www.alzforum.org/news/conference-coverage/does-alzheimers-start-heart-cholinergic-system

- 24. **Schmitz TW**, Correia MM, Ferreira CS, Prescot AP, Anderson, MC (2017). Hippocampal GABA enables inhibitory control over unwanted thought. *Nature Communications*, 8, 1311.

  Altmetric: 879 | https://www.altmetric.com/details/28329401

- 22. **Schmitz TW**, Spreng RN (2016). Basal forebrain degeneration precedes and predicts the cortical spread of Alzheimer's pathology. *Nature Communications*, 7, 13249.

  Altmetric: 174 | https://www.altmetric.com/details/13334787
  Alzforum coverage: https://www.alzforum.org/news/research-news/are-cholinergic-neurons-patient-zero-alzheimers-disease