

CURRICULUM VITAE

January 2019

Chase Russell Figley

Department of Radiology
University of Manitoba
MS793 – 820 Sherbrook Street
Winnipeg, MB, Canada, R3A 1R9

Fax: 204-787-2080
Phone: 204-787-2994
E-Mail: chase.figley@umanitoba.ca
Lab Website: www.figleylab.ca

ACADEMIC APPOINTMENTS:

Assistant Professor (Tenure-Track)	University of Manitoba Department of Radiology	<i>September 2013 - present</i>
Assistant Professor (Core Member)	University of Manitoba Biomedical Engineering (BME) Graduate Program	<i>September 2013 - present</i>
Principal Investigator	Winnipeg Health Sciences Centre Kleysen Institute for Advanced Medicine Neuroscience Research Program and Division of Diagnostic Imaging	<i>September 2013 - present</i>
Research Scientist (Adjunct)	Johns Hopkins University Department of Psychological & Brain Sciences	<i>September 2013 - present</i>
Assistant Professor (Adjunct)	University of Manitoba Department of Physiology and Pathophysiology	<i>September 2015 - present</i>
Assistant Professor (Adjunct)	University of Manitoba Department of Psychology	<i>April 2016 - present</i>

EDUCATION:

CIHR Postdoctoral Fellowship	Johns Hopkins University Department of Psychological & Brain Sciences Solomon H. Snyder Department of Neuroscience F.M. Kirby Center for Functional Brain Imaging Supervisor: Dr. Susan M. Courtney, PhD	<i>September 2010 - August 2013</i>
---------------------------------	---	-------------------------------------

Ph.D.	Queen's University	September 2005 - October 2010
	Centre for Neuroscience Studies	
	<i>Thesis: Improved Methods for Motion-Compensating and Event-Related Spinal Functional Magnetic Resonance Imaging (fMRI)</i>	
	Supervisor: Dr. Patrick W. Stroman, PhD	
	External Examiner: Dr. Alex L. MacKay, PhD	
B.Sc. Honors	University of Saskatchewan	September 2001 - May 2005
	Department of Chemistry	
	<i>Thesis: A study of the chemical reactions between tert-butyl hydroperoxide and 2,2'-Diphenyl-1-picrylhydrazyl</i>	
	Supervisor: Dr. John A. Weil, PhD	
	Co-Supervisor: Dr. Marek Majewski, PhD	

GRANTS AND RESEARCH AWARDS:

PRINCIPAL INVESTIGATOR (AWARDED)

- Thorlakson Foundation Fund Operating Grant:** May 2018 – September 2020
\$30,000 (\$15,000 per annum)

"Evaluating structural vs. functional connectivity relationships in neurologically-healthy human brain networks: A pilot study"
- Natural Sciences and Engineering Research Council (NSERC) Discovery Grant:** September 2016 – September 2021
\$140,000 (\$28,000 per annum)

"Development and application of cognitive neuroimaging tools for quantitative white matter analyses"
- University of Manitoba (UofM) University Collaborative Research Program:** January 2016 – January 2017
\$100,000 (total)
\$25,000 (awarded) plus an additional \$75,000 (contribution from industry partner)

"Cognitive performance in Multiple Sclerosis: Effects of white matter structure and resting-state functional connectivity"
- Health Sciences Centre Foundation (HSCF) General Operating Grant:** September 2014 – September 2016
\$66,750 (\$33,375 per annum)

"Investigating the neural basis of cognitive decline in Multiple Sclerosis using high-field"

structural and functional magnetic resonance imaging”

5. **University of Manitoba Startup Fund:** September 2013 – September 2016
\$150,000 (\$50,000 per annum)
“Figley Neuroimaging Lab Startup Funding”

CO-INVESTIGATOR (AWARDED)

1. **Crohn’s and Colitis Canada** September 2018 – September 2021
\$375,000 (\$125,000 per annum)

“Brain Imaging of Psychiatric Comorbidities and Their Relationships to Fatigue in IBD”

PI: Charles Bernstein, University of Manitoba, Department of Internal Medicine (Gastroenterology)

2. **Multiple Sclerosis (MS) Society of Canada Research Operating Grant:** May 2016 – May 2019
\$266,100 (\$88,700 per annum)

“Comorbidity, Cognition and Multiple Sclerosis (C-CoMS)”

PI: Ruth Ann Marrie, University of Manitoba, Department of Internal Medicine (Neurology)

3. **Brain Canada Platform Support Grant:** April 2015 – April 2018
\$300,000 (\$100,000 per annum)

“The Manitoba Neuroimaging Platform”

PI: Chris Anderson, University of Manitoba, Department of Pharmacology & Therapeutics

4. **University of Manitoba Department of Surgery Pilot Grant Competition:** January 2014 – January 2015
\$14,000

“Novel Neuroimaging Assessment of Cerebrovascular Reactivity and Default-Mode Networks in Adolescent Sports-Related Concussion”

PI: Patrick McDonald, University of Manitoba, Department of Surgery

SCHOLARSHIPS AND FELLOWSHIPS:

1. *CIHR Postdoctoral Fellowship*
**Ranked in the top 2% (10th of 500 applications)* September 2010 – September 2013
\$150,000 (\$50,000 per annum)
2. *Johns Hopkins University Fellowship* September 2010 – September 2013
\$3,000 (\$1,000 per annum)
3. *CIHR Fredrick Banting & Charles Best
Canada Graduate Scholarship* September 2008 – September 2010
\$70,000 (35,000 per annum)
4. *Queen's University Award of
Excellence for Neuroscience Research* September 2006 – September 2010
\$15,000 (\$3,000 per annum)
5. *International Society for Magnetic
Resonance in Medicine (ISMRM)
Education and Travel Award* April 2009
\$600 (one-time award)
6. *Ontario Graduate Scholarship for
Science and Technology* September 2006 – September 2008
\$30,000 (\$15,000 per annum)
7. *International Society for Magnetic
Resonance in Medicine (ISMRM)
Education and Travel Award* May 2008
\$600 (one-time award)
8. *International Society for Magnetic
Resonance in Medicine (ISMRM)
Education and Travel Award* May 2007
\$600 (one-time award)
9. *R.S. McLaughlin Research Fellowship* September 2005 – September 2006
\$10,000 (one-time award)
10. *University of Saskatchewan Summer
Research Scholarship* May 2005 – September 2005
\$7,000 and laboratory placement
11. *University of Saskatchewan J.M. Pepper
Honors Research Award* May 2005
Book, Plaque, and \$200
12. *University of Saskatchewan Nixon
Summer Research Scholarship* May 2004 – June 2004
\$6,000 and laboratory placement
13. *University of Saskatchewan Entrance
Scholarship* September 2001 – September 2002
\$2,500 (one-time award)

PEER-REVIEWED PUBLICATIONS:

NOTE: Names of my staff and trainees are underlined in each section below, and contributions for which I am the corresponding author are indicated by an asterisk (*).

IN PRINT

1. RA Marrie, R Patel, **CR Figley**, J Kornelsen, J Bolton, L Graff, E Mazerolle, CN Bernstein, and JD Fisk (for the CCOMS Study Group). "Anxiety and diabetes adversely affect cognition in multiple sclerosis." *Multiple Sclerosis and Related Disorders* 27: 164-170 (2019).
2. J Puig, G Blasco, A Alberich-Bayarri, G Schlaug, G Deco, C Biarnes, M Navas-Martí, M Rivero, J Gich, J Figueras, C Torres, P Daunis-i-Estadella, CL Oramas-Requejo, J Serena, CM Stinear, A Kuceyeski, C Soriano-Mas, G Thomalla, M Essig, **CR Figley**, B Menon, A Demchuk, K Nael, M Wintermark, DS Liebeskind, S Pedraza. "Resting state functional connectivity MRI and outcome after acute stroke." *Stroke* 49(10): 2353–2360 (2018).
3. LE Lee, E Ljungberg, D Shin, **CR Figley**, IM Vavasour, A Rauscher, J Cohen-Adad, DKB Li, AL Traboulsee, AL MacKay, J Lee, and SH Kolind. "Multivendor reproducibility of myelin water imaging *in vivo* using a 3D gradient and spin echo sequence." *Frontiers in Neuroscience* 12(854): 1-8 (2018).
4. MN Uddin and **CR Figley***. "Effect of echo time and T2-weighting on T1-weighted/T2-weighted MRI ratio mapping at 3T." *Magnetic Resonance Imaging* 51: 35-43 (2018).
5. MN Uddin, TD Figley, RA Marrie and **CR Figley*** (for the CCOMS Study Group). "Can T1w/T2w ratio be used as a myelin-specific measure in subcortical structures? Comparisons between FSE-based T1w/T2w ratios, GRASE-based T1w/T2w ratios and multi-echo GRASE-based myelin water fractions." *NMR in Biomedicine* 31(3): e3868, 1-11 (2018).
6. AS Shatil, MN Uddin, KM Matsuda, and **CR Figley***. "Quantitative ex vivo MRI changes due to progressive formalin fixation in whole human brain specimens: Longitudinal characterization of diffusion, relaxometry, and myelin water fraction measurements at 3T." *Frontiers in Medicine* 5(31): 1-15 (2018).
7. AD Mulholland, RC Vitorino, SP Hojjat, AY Ma, L Zhang, L Lee, TJ Carroll, CG Cantrell, **CR Figley**, and RI Aviv. "Spatial correlation of pathology and perfusion changes within the cortex and white matter in multiple sclerosis." *American Journal of Neuroradiology* 39(1): 91-96 (2018).
8. TD Figley, BM Moghadam, N Bhullar, J Kornelsen, SM Courtney, and **CR Figley***. "Probabilistic white matter atlases of human auditory, basal ganglia, language,

precuneus, sensorimotor, visual, and visuospatial networks." *Frontiers in Human Neuroscience* 11(306): 1-12 (2017).

9. AY Ma, RC Vitorino, SP Hojjat, AD Mulholland, L Lee, TJ Carroll, CG Cantrell, **CR Figley**, and RI Aviv. "The relationship between white matter tract damage and grey matter perfusion in large-scale functionally-defined networks in multiple sclerosis." *Multiple Sclerosis Journal* 23(14): 1884-1892 (2017).
 10. MS Alexander, N Kozyrev, **CR Figley**, and JS Richards. "Altered spinal cord activity during sexual stimulation in women with SCI: a pilot fMRI study." *Spinal Cord Series and Cases* 3: 16041 (2017).
 11. AS Shatil, KM Matsuda, and **CR Figley***. "A method for whole brain ex vivo magnetic resonance imaging with minimal susceptibility artifacts." *Frontiers in Neurology* 7(208): 1-10 (2016).
 12. **CR Figley***, JSA Asem, EL Levenbaum, and SM Courtney. "Effects of body mass index and body fat percent on default mode, executive control, and salience network structure and function." *Frontiers in Neuroscience* 10(234): 1-23 (2016).
- *Featured in several media outlets, including the Montreal Gazette, Vancouver Sun, and National Post.*
13. MS Alexander, N Kozyrev, RL Bosma, **CR Figley**, JS Richards, and PW Stroman. "fMRI localization of spinal cord processing underlying female sexual arousal." *Journal of Sex & Marital Therapy* 42(1): 36-47 (2016).
 14. AS Shatil*, S Younas*, H Pourreza, and **CR Figley***. "Heads in the cloud: A primer on neuroimaging applications of high performance computing." *Magnetic Resonance Insights* 8(Suppl 1): 69-80 (2015). **These authors contributed equally to this work.*
 15. TD Figley*, N Bhullar*, SM Courtney, and **CR Figley***. "Probabilistic atlases of default mode, executive control and salience network white matter tracts: An fMRI-guided diffusion tensor imaging and tractography study." *Frontiers in Human Neuroscience* 9(585): 1-20 (2015). **These authors contributed equally to this work.*
 16. MJ Ellis, **CR Figley**, WA Mutch, E Massicotte, DJ Mikulis, M Essig, and CH Tator. "Neuroimaging in sports-related concussion management: Current status and future directions." *Current Research: Concussion* 1(1): 33-39 (2014).
 17. CK Jones, **CR Figley**, PCM van Zijl, PA Calabresi, and SM Courtney. "Chemical exchange saturation transfer imaging in Multiple Sclerosis." *Multiple Sclerosis Journal* 19(10): 1391-1423 (2013).
 18. CK Jones, **CR Figley**, PCM van Zijl, PA Calabresi, and SM Courtney. "Chemical exchange saturation transfer imaging in Multiple Sclerosis." *International Journal of MS Care* 15(Supplement 3): 28 (2013).
 19. **CR Figley** and PW Stroman. "Measurement and characterization of the human spinal cord SEEP response using event-related spinal fMRI." *Magnetic Resonance Imaging* 30(4): 471-484 (2012).

20. N Kozyrev, **CR Figley**, M Sipski-Alexander, JS Richards, R Bosma, and PW Stroman. "Neural correlates of sexual arousal in the spinal cords of able-bodied men: A spinal fMRI investigation." *Journal of Sex & Marital Therapy* 38(5): 418-435 (2012).
21. **CR Figley** and PW Stroman. "The role(s) of astrocytes and astrocyte activity in neurometabolism, neurovascular coupling, and the production of functional neuroimaging signals." *European Journal of Neuroscience* 33(4): 577-588 (2011).
- * Figure 2 from our paper was chosen as the cover art for this issue of EJN.
 ‡ Ranked 6th on EJN's "Most Cited" List (among articles published in 2011 or 2012)
22. **CR Figley**. "Lactate transport and metabolism in the human brain: Implications for the astrocyte-neuron lactate shuttle hypothesis." *Journal of Neuroscience* 31(13): 4768-4770 (2011).
23. **CR Figley**, JK Leitch, and PW Stroman. "In contrast to BOLD: signal enhancement by extravascular water protons as an alternative mechanism of endogenous fMRI signal change." *Magnetic Resonance Imaging* 28(8): 1234-1243 (2010).
24. JK Leitch, **CR Figley**, and PW Stroman. "Applying functional MRI to the spinal cord and brainstem." *Magnetic Resonance Imaging* 28(8): 1225-1233 (2010).
- * Listed Among ScienceDirect "Top 25 Hottest Articles" (i.e., most downloaded in MRI between April and June 2010).
25. **CR Figley** and PW Stroman. "Development and validation of retrospective spinal cord motion time-course estimates (RESPITE) for spin echo spinal fMRI: Improved sensitivity and specificity by means of a motion-compensating general linear model analysis." *NeuroImage* 44(2): 421-427 (2009).
26. **CR Figley**, D Yau, and PW Stroman. "Attenuation of Lower-Thoracic, Lumbar, and Sacral Spinal Cord Motion: Implications for Imaging Human Spinal Cord Structure and Function." *American Journal of Neuroradiology* 29(8): 1450-1454 (2008).
27. PW Stroman, **CR Figley**, and CM Cahill. "Spatial normalization, bulk motion correction, and coregistration for functional magnetic resonance imaging of the human cervical spinal cord and brainstem." *Magnetic Resonance Imaging* 26(6): 809-814 (2008).
28. **CR Figley** and PW Stroman. "Investigation of Human Cervical and Upper Thoracic Spinal Cord Motion: Implications for Imaging Spinal Cord Structure and Function." *Magnetic Resonance in Medicine* 58(1): 185-189 (2007).

IN PRESS (ONLINE AHEAD OF PRINT)

29. S Younas and **CR Figley***. "Development, implementation and validation of a medial axis extraction algorithm for complex 3D objects." *Journal of Medical and Biological Engineering* (Accepted – In Press).
30. MN Uddin, TD Figley, KG Solar, AS Shatil, and **CR Figley***. "Comparisons between multicomponent myelin water fraction, T1w/T2w ratio, and diffusion tensor

imaging measures in healthy human brain structures." *Scientific Reports* (Accepted – In Press).

SUBMITTED (UNDER REVIEW)

31. KG Solar, TD Figley, SM Courtney, J Kornelsen, and **CR Figley***. "Relationships between white matter microstructure and functional connectivity throughout large-scale human brain networks." *Brain Structure and Function* (Submitted – Under Review).
32. H J Puig, G Blasco, M Terceño, P Daunis-i-Estadella, G Schlaug, M Hernandez-Perez, V Cuba, G Carbó, J Serena, M Essig, **CR Figley**, K Nael, C Leiva-Salinas, S Pedraza, Y Silva. "Predicting motor outcome in acute intracerebral hemorrhage." *American Journal of Neuroradiology* (Submitted – Under Review).

IN PREPARATION (to be submitted prior to March 2019)

33. S Prisada*, MN Uddin*, TD Figley, and **CR Figley*** (for the CCOMS Study Group). "Spatial normalization of brain MRI data in the presence of MS lesions: A quantitative comparison of image processing pipelines on real and simulated MS lesion data." *These authors contributed equally to this work. [Will be submitted to *American Journal of Neuroradiology*]
34. S Younas, M Martin, SM Courtney, and **CR Figley***. "Quantitative tract integrity profiles (Q-TIPs): A novel toolbox for assessing white matter imaging signals along fiber tracts." [Will be submitted to *NeuroImage*]
35. MN Uddin, TD Figley, J Fisk, C Helmick, J Kornelsen, RA Marrie, E Mazerolle, R Patel, and **CR Figley*** (on behalf of the CCOMS Study Group). "Neuroimaging data acquisition and minimal image processing for the Canadian Comorbidities, Cognition and Multiple Sclerosis (CCOMS) Study". [Will be submitted to *NeuroImage: Clinical*]

CONFERENCE ABSTRACTS AND PROCEEDINGS:

1. MN Uddin, TD Figley, and **CR Figley***. "Comparison of microstructural changes in multiple sclerosis lesions across multiple MRI measures." *Organization for Human Brain Mapping (OHBM) 24th Annual Meeting (Singapore, June 17-21, 2018)*.
2. S Pirzada, MN Uddin, TD Figley, and **CR Figley***. "Comparing MRI data preprocessing pipelines for multiple sclerosis patients." *Organization for Human Brain Mapping (OHBM) 24th Annual Meeting (Singapore, June 17-21, 2018)*.
3. MN Uddin, TD Figley, and **CR Figley***. "Direct comparison of MRI based myelin measurements in MS lesions and normal appearing white matter." *12th Annual Canadian Association for Neuroscience (CAN) Meeting (Vancouver, BC, Canada, May 13-16, 2018)*.

4. S Pirzada, MN Uddin, TD Figley, and **CR Figley***. "Comparing spatial normalization methods in the presence of MS lesions using real and simulated brain MRI data." *12th Annual Canadian Association for Neuroscience (CAN) Meeting (Vancouver, BC, Canada, May 13-16, 2018).*
5. J Puig, G Blasco, A Alberich-Bayarri, C Biarnes, M Navas-Martí, M Rivero, J Gich, P Daunis-i-Estadella, CL Oramas-Requejo, J Serena, G Schlaug, M Essig, **CR Figley**, K Nael, M Wintermark, S Pedraza. "Resting state functional connectivity MRI and outcome after acute stroke." *American Society for Neuroradiology (ASNR) 56th Annual Meeting (Vancouver, BC, Canada, June 02-07, 2018).*
6. J Puig, G Blasco, A Alberich-Bayarri, C Biarnes, M Martí-Navas, J Gich, M Rivero, **CR Figley**, K Nael, C Leiva-Salinas, S Pedraza, L Ramió-Torrentà. "Functional network connectivity and clinical phenotypes of Multiple Sclerosis: The CONNECTIMS study." *American Society for Neuroradiology (ASNR) 56th Annual Meeting (Vancouver, BC, Canada, June 02-07, 2018).*
7. RA Marrie, R Patel, JJ Marriott, **CR Figley**, J Kornelsen, L Graff, J Bolton, CN Bernstein, and J Fisk (for the CCOMS Study Group). "Adverse impact of comorbidity on cognitive function in Multiple Sclerosis." *American Academy of Neurology (AAN) 70th Annual Meeting (Los Angeles, CA, USA, April 21-27, 2018).*
8. MN Uddin, SM Courtney, and **CR Figley***. "Echo time optimization for T1-weighted/T2-weighted ratio mapping in the human brain at 3T." *Organization for Human Brain Mapping (OHBM) 23rd Annual Meeting (Vancouver, BC, Canada, June 25-29, 2017).*
9. MN Uddin, KG Solar, AS Shatil, SM Courtney, and **CR Figley***. "Direct comparisons between quantitative magnetic resonance imaging measures in the human brain." *Organization for Human Brain Mapping (OHBM) 23rd Annual Meeting (Vancouver, BC, Canada, June 25-29, 2017).*
10. KG Solar, SM Courtney, **CR Figley**, and J Kornelsen. "Does structural connectivity really predict functional connectivity in resting state brain networks?" *Organization for Human Brain Mapping (OHBM) 23rd Annual Meeting (Vancouver, BC, Canada, June 25-29, 2017).*
11. S Younas, SM Courtney, M Martin, and **CR Figley***. "Quantitative Tract Integrity Profiles (QTIPs): A novel neuroimaging toolbox for evaluating along-tract white matter integrity." *The 40th Annual Canadian Medical and Biological Engineering Conference (CMBEC40) (Winnipeg, MB, Canada, May 23-26, 2017).*

** Best Student Paper Award - 2nd Place (\$300 Cash Prize).*

12. AS Shatil, K Matsuda, and **CR Figley***. "Effects of formalin fixation on myelin water fraction MRI measurements in human white matter: A novel ex vivo study." *The 40th Annual Canadian Medical and Biological Engineering Conference (CMBEC40) (Winnipeg, MB, Canada, May 23-26, 2017).*

** Best Student Paper Award – 3rd Place (\$200 Cash Prize).*

13. MN Uddin, TD Figley, RA Marrie, and **CR Figley***. "Comparison of multi-echo gradient and spin echo (GRASE) and fast spin echo (FSE) MRI sequences for T1w/T2w ratio mapping." *The 40th Annual Canadian Medical and Biological Engineering Conference (CMBEC40) (Winnipeg, MB, Canada, May 23-26, 2017)*.
14. KG Solar, J Kornoslen, SM Courtney, and **CR Figley***. "Structural and functional connectivity relationships in the brain: How do they vary between large-scale networks and across individuals?" *Society for Neuroscience (SfN) 46th Annual Meeting (San Diego, CA, USA, November 12-16, 2016)*.
15. S Younas, SM Courtney, M Martin, and **CR Figley***. "Quantitative Tract Integrity Profiles (QTIPs): A Novel Toolbox for Assessing Tract-Based White Matter Integrity." *Society for Neuroscience (SfN) 46th Annual Meeting (San Diego, CA, USA, November 12-16, 2016)*.
16. MN Uddin, KG Solar, AS Shatil, S Younas, SM Courtney, and **CR Figley***. "Microstructural correlates of myelin water fraction, T1w/T2w ratio and diffusion tensor imaging measures in human brain." *Society for Neuroscience (SfN) 46th Annual Meeting (San Diego, CA, USA, November 12-16, 2016)*.
17. AS Shatil, K Matsuda, and **CR Figley***. "Characterizing quantitative MRI changes due to formalin fixation: an ex vivo human brain imaging study." *Society for Neuroscience (SfN) 46th Annual Meeting (San Diego, CA, USA, November 12-16, 2016)*.
18. LE Lee, E Ljungberg, J Lam, A Mackay, A Rauscher, D Li, A Traboulee, **CR Figley**, and S Kolind. "The Consistency of Myelin-Specific Magnetic Resonance Imaging Across Sites and Scanner Manufacturers in vivo." *Pan-Asian Committee for Treatment and Research in Multiple Sclerosis (PACTRIMS) 9th Annual Congress (Bangkok, Thailand, October 27-29, 2016)*.
19. TD Figley, BM Moghadam, N Bhullar, and **CR Figley***. "Probabilistic atlases of white matter pathways underlying auditory, language, sensorimotor, and visual networks." *Fifth Biennial Conference on Resting State and Brain Connectivity (Vienna, Austria, September 21-23, 2016)*.
20. KG Solar, J Kornoslen, SM Courtney, and **CR Figley***. "Structural and functional connectivity relationships within brain networks: Does the type of structural connectivity measure matter?" *Manitoba Neuroscience Network (MNN) 6th Annual Meeting (Winnipeg, MB, Canada, June 14-15, 2016)*.
21. S Younas, SM Courtney, M Martin, and **CR Figley***. "Quantitative Tract Integrity Profiles (QTIPs): A Novel Toolbox for Assessing Tract-Based White Matter Integrity." *Manitoba Neuroscience Network (MNN) 6th Annual Meeting (Winnipeg, MB, Canada, June 14-15, 2016)*.
22. MN Uddin, KG Solar, AS Shatil, S Younas, SM Courtney, and **CR Figley***. "Microstructural correlates of MRI measures in human brain white matter." *Manitoba Neuroscience Network (MNN) 6th Annual Meeting (Winnipeg, MB, Canada, June 14-15, 2016)*.
23. AS Shatil, K Matsuda, and **CR Figley***. "Characterizing quantitative MRI changes due to formalin fixation: a longitudinally ex vivo human brain imaging study."

Manitoba Neuroscience Network (MNN) 6th Annual Meeting (Winnipeg, MB, Canada, June 14-15, 2016).

24. LE Lee, E Ljungberg, J Lam, A Mackay, A Rauscher, D Li, A Traboulsee, **CR Figley**, and S Kolind. "Examining the reproducibility of myelin-specific magnetic resonance imaging across sites and scanner manufacturers." *American Academy of Neurology (AAN) 68th Annual Meeting (Vancouver, BC, Canada, April 15-21, 2016).*
25. S Younas, M Martin, and **CR Figley***. "Quantitative Tract Integrity Profiles (Q-TIPs): A Novel Toolbox for Assessing Tract-Based White Matter Integrity." *BioMedCon 2015 (Winnipeg, MB, Canada, October 30, 2015).*
26. AS Shatil, K Matsuda, and **CR Figley***. "Characterizing radiology-pathology correlations using ex vivo MRI." *BioMedCon 2015 (Winnipeg, MB, Canada, October 30, 2015).*
27. N Bhullar, TD Figley, SM Courtney, and **CR Figley***. "fMRI-guided DTI atlases of the default mode, executive control and salience networks." *Organization for Human Brain Mapping (OHBM) 21st Annual Meeting (Honolulu, HI, USA, June 14-18, 2015).*
28. N Bhullar, TD Figley, SM Courtney, and **CR Figley***. "fMRI-guided DTI atlases of the default mode, executive control and salience networks." *Manitoba Neuroscience Network (MNN) 5th Annual Scientific Meeting (Winnipeg, MB, Canada June 12, 2015).*

** Best Postdoctoral Fellow Poster – 1st Place (\$300 Cash Prize).*

29. M Sipski-Alexander, N Kozyrev, RL Bosma, **CR Figley**, JS Richards, and PW Stroman. "fMRI Changes during sexual stimulation in women with SCI versus able-bodied women: A pilot study." *International Spinal Cord Society (ISCoS) 53rd Annual Meeting (Maastricht, The Netherlands, September 2-4, 2014).*
30. **CR Figley***, EL Levenbaum, ISA Asem, and SM Courtney. "Individual differences in brain structure and functional connectivity related to body mass index (BMI) and body fat percentage (BFP)." *Society for Neuroscience (SfN) 43rd Annual Meeting - Program Number 185.11 (San Diego, CA, USA, November 9-13, 2013).*
31. CK Jones, **CR Figley**, PCM van Zijl, PA Calabresi, and SM Courtney. "Chemical exchange saturation transfer imaging in Multiple Sclerosis." *Fifth Cooperative Meeting of the Consortium of Multiple Sclerosis Centers (CMSC) and Americas Committee for Treatment Research in Multiple Sclerosis (ACTRIMS) – Program Number P35 (Orlando, FL, USA, May 29 – June 01, 2013).*
32. **CR Figley**, E Awuah, B Hurst, and SM Courtney. "Individual differences in cognitive performance: Relation to brain structure and function." *Society for Neuroscience (SfN) 42nd Annual Meeting - Program Number 393.25 (New Orleans, LA, USA, October 13-17, 2012).*
33. **CR Figley**, RL Beazer, and PW Stroman. "Epoch to impulse: Developing a method for event-related spinal fMRI." *Proceedings of the American Society of Functional Neuroradiology (ASFNR) 4th Annual Meeting (Las Vegas, Nevada, USA, February 24-26, 2010).*

34. **CR Figley**, JK Leitch, C Nahanni, and PW Stroman. "Elucidating the impulse response function of SEEP contrast in the human spinal cord by means of event-related spin-echo spinal fMRI." *Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM) 17th Annual Scientific Meeting (Honolulu, Hawaii, USA, April 18-24, 2009)*.
35. N Kozyrev, **CR Figley**, and PW Stroman. "Heart-rate based analysis of fMRI data can reveal 'lost' signal intensity changes in the spinal cord associated with distinct phases of the human sexual response." *Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM) 17th Annual Scientific Meeting (Honolulu, Hawaii, USA, April 18-24, 2009)*.
36. PW Stroman, B Coe, **CR Figley**, JK Leitch, and DP Munoz. "Attentional modulation of thermal sensory responses in the human spinal cord." *Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM) 17th Annual Scientific Meeting (Honolulu, Hawaii, USA, April 18-24, 2009)*.
37. JK Leitch, CM Cahill, N Foad-Ghazni, **CR Figley**, and PW Stroman. "Spinal cord and brainstem activation in carpal tunnel syndrome patients in response to noxious stimuli: A spinal fMRI study." *Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM) 17th Annual Scientific Meeting (Honolulu, Hawaii, USA, April 18-24, 2009)*.
38. **CR Figley** and PW Stroman. "Physiological noise reduction in spinal fMRI from a single-stage, motion-compensating GLM approach." *Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM) 16th Annual Scientific Meeting (Toronto, Ontario, Canada, May 3-9, 2008)*.
39. D Yau, **CR Figley**, C Nahanni, and PW Stroman. "Examination of cardiac-related motion in the lower-thoracic and lumbar spinal cord." *Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM) 16th Annual Scientific Meeting (Toronto, Ontario, Canada, May 3-9, 2008)*.
40. PW Stroman, **CR Figley**, N Foad-Ghazni, and N Kozyrev. "The enigma of intermediate and ventral spinal cord activity with thermal sensory stimulation: A spinal fMRI investigation." *Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM) 16th Annual Scientific Meeting (Toronto, Ontario, Canada, May 3-9, 2008)*.
41. NA Kozyrev, MS Alexander, JS Richards, **CR Figley**, and PW Stroman. "Mapping a neural model of sexual responses in the human spinal cord with functional magnetic resonance imaging." *Society for Neuroscience (SfN) 38th Annual Meeting - Program Number 577.12 (Washington, DC, USA, November 15-19, 2008)*.
42. **CR Figley** and PW Stroman. "Development of a novel method for motion-compensated spinal fMRI." *Proceedings of the 6th Annual Imaging Network of Ontario Conference (Toronto, Ontario, Canada, March 28-29, 2007)*.
43. **CR Figley** and PW Stroman. "A new method of motion-compensated spinal fMRI: Identifying human spinal cord function with increased sensitivity and reproducibility." *Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM) 15th Annual Scientific Meeting (Berlin, Germany, May 19-25, 2007)*.

44. **CR Figley** and PW Stroman. "Characterization of spinal cord motion as a means of reducing errors in spinal fMRI." *Proceedings of the 5th Annual Imaging Network of Ontario Conference (Toronto, Ontario, Canada, April 3-4, 2006)*.
45. **CR Figley** and PW Stroman. "Characterization of spinal cord motion: A source of errors in spinal fMRI?" *Proceedings of the International Society for Magnetic Resonance in Medicine (ISMRM) 14th Annual Scientific Meeting (Seattle, Washington, USA, May 6-12, 2006)*.
46. PW Stroman, **CR Figley**, J Kornelsen, C Cahill, K Smith, and R Pokrupa. "Development of spinal fMRI towards a practical tool for assessing spinal cord injury." *International Spinal Research Trust, 9th Research Network Meeting (London, England, September 1-2, 2006)*.
47. **CR Figley**, DF Figley, and V Salares. "Characterization of arsenic and fungal contaminants in the wall cavities of preserved wood foundations." *Proceedings of the 10th International Conference on Indoor Air Quality and Climate (Beijing, China, September 4-9, 2005)*.
48. **CR Figley**, M Majewski, and JA Weil. "Study of the chemical reaction(s) between *tert*-butyl hydroperoxide and 2,2'-Diphenyl-1-picrylhydrazyl." *Proceedings of the 2005 Western Canadian Undergraduate Chemistry Conference (Victoria, British Columbia, Canada, May 5-7, 2005)*.

RESEARCH TALKS:

1. **CR Figley**. "Clinical and research applications of diffusion MRI." Department of Radiology, University of Manitoba (Winnipeg, Manitoba, March 20, 2018).
2. **CR Figley**. "Developing and applying new methods to study human white matter connectomes at the network level." Department of Medical Biophysics, Western University (London, Ontario, March 09, 2017).
3. **CR Figley**. "The role of diffusion tensor imaging (DTI) in mild traumatic brain injury." Winnipeg Health Sciences Centre, Mild Traumatic Brain Injury Symposium (Winnipeg, Manitoba, February 24, 2017).
4. **CR Figley**. "What's new in human neuroimaging? Recent advances in MRI acquisition, analysis, and applications." Manitoba Neuroscience Network Visiting Speaker and Seminar Series (Winnipeg, Manitoba, January 27, 2017).
5. **CR Figley**. "Relationships between structural and functional brain connectivity in default mode, executive control, and salience networks." Centre for Healthcare Innovation, Clinical Research Information Networking Group (CRINGe) Seminar Series (Winnipeg, Manitoba, December 01, 2016).
6. **CR Figley**. "Recent advances in white matter imaging: Where we've been, where we are, and where we're going." University of Manitoba, Brain Canada Platform Neuroimaging Symposium (Winnipeg, Manitoba, October 14, 2016).

7. **CR Figley.** "New Tools for (and Applications of) Human White matter MRI." Winnipeg Health Sciences Centre, Neuroscience Research Program (Winnipeg, Manitoba, April 05, 2016).
8. **AS Shatil** and **CR Figley.** "Characterizing changes in quantitative MRI measures as a function of formalin fixation: a longitudinal *ex vivo* human brain imaging study." University of Manitoba, Biomedical Engineering Seminar Series (Winnipeg, Manitoba, December 17, 2015).
9. **S Younas** and **CR Figley.** "Quantitative tract integrity profiles (Q-TIPs): A novel toolbox for assessing tract-based white matter integrity." University of Manitoba, Biomedical Engineering Seminar Series (Winnipeg, Manitoba, September 24, 2015).
10. **CR Figley.** "Stereotaxic atlases and analyses for quantitative white matter imaging." Siemens Healthcare Global Headquarters (Erlangen, Germany, May 13, 2015).
11. **N Buhler** and **CR Figley.** "Probabilistic atlases of default mode, executive control and salience network white matter tracts: An fMRI-guided diffusion tensor imaging and tractography study." Radiology Resident Research Day (Winnipeg, Manitoba, April 02, 2015).
12. **CR Figley.** "New tools for white matter imaging in Multiple Sclerosis." Joint Department of Neurology and EndMS Research & Training Network Symposium, University of Western Ontario (London, Ontario, February 25, 2015).
13. **CR Figley.** "Novel tract-based methods for analyzing quantitative white matter imaging data." Advanced Spinal Cord Imaging in MS Symposium (Toronto, Ontario, October 25, 2014).
14. **CR Figley.** "Development and applications of advanced Diffusion Tensor Imaging (DTI) methods." Manitoba Neuroscience Network Retreat (Gimli, Manitoba, June 24-25, 2014).
15. **N Buhler** and **CR Figley.** "Stereotaxic diffusion tensor imaging atlases of default mode, executive control, and salience network white matter tracts." Radiology Resident Research Day (Winnipeg, Manitoba, June 17, 2014).
16. **CR Figley.** "Imaging human brain structure and function: Novel methods & applications." Department of Physics, University of Winnipeg (Winnipeg, Manitoba, January 17, 2014).
17. **CR Figley.** "Development and application of novel fMRI and DTI methods for human neuroimaging in healthy and clinical populations." Department of Radiology, University of Manitoba (Winnipeg, Manitoba, December 14, 2012).
18. **CR Figley.** "fMRI methods, mechanisms and applications: Physiological basis of fMRI signals and neural correlates of cognitive performance in multiple sclerosis." Hotchkiss Brain Institute and Department of Radiology, University of Calgary (Calgary, Alberta, April 16, 2012).
19. **CR Figley.** "Could functional neuroimaging signals reflect astrocytic more than

neuronal activity?" Department of Psychology, University of Western Ontario (London, Ontario, December 11, 2009).

20. **CR Figley.** "Old challenges, new methods, and future directions for spinal cord fMRI." F.M. Kirby Research Center for Functional Brain Imaging, Kennedy Krieger Institute, Johns Hopkins Hospital (Baltimore, Maryland, USA, October 01, 2009).
21. **CR Figley.** "Improved sensitivity and reliability of spinal fMRI by removing sources of motion-related physiological noise." *Centre for Neuroscience Studies, Graduate Student Seminar Series (aka "The Friday Fights")* (Queen's University, Kingston, Ontario, Canada, May 04, 2007).
22. **CR Figley.** "Evaluation of spinal cord motion as a source of errors in spinal fMRI." *Queen's University 9th Annual Scientific Meeting for Health Sciences Research Trainees* (Queen's University, Kinston, Ontario, Canada, May 30, 2006).
23. **CR Figley.** "Study of the chemical reaction(s) between *tert*-butyl hydroperoxide and 2,2'-diphenyl-1-picrylhydrazyl." *Western Canadian Undergraduate Chemistry Conference 2005* (Victoria, British Columbia, Canada, May 5-7, 2005).

OUTREACH TALKS AND ACTIVITIES:

24. **CR Figley.** "An Expedited Permanent Residency Policy for Canadian-Educated PhD Students and PDFs" Centre for Healthcare Innovation, Academic Health Sciences Leadership Program. (Winnipeg, Manitoba, February 15, 2017).
25. **CR Figley.** Guest speaker and panelist on an Alumni Career Panel. (Queen's University Neuroscience Symposium, Kingston, Ontario, Canada, September 09, 2016).
26. **CR Figley.** 3-minute interview about my lab's latest neuroimaging research. CTV Morning Live (CTV, Winnipeg, Manitoba, Canada, June 24, 2016).
27. **CR Figley.** 2-minute live interview about multiple sclerosis research. Health Sciences Centre Home Lottery Funding Drive (The Drive Radio, 94.3FM, Winnipeg, Manitoba, Canada, June 24, 2016).
28. **CR Figley,** RA Marrie, JJ Marriott (Moderator: D Hominuk). "Multiple sclerosis: Questions and answers from Manitoba researchers." University of Manitoba Café Scientifique (McNally Robinson Booksellers, Winnipeg, Manitoba, Canada, March 07, 2016).
29. **CR Figley.** 3-minute live interview about multiple sclerosis research. Health Sciences Centre Bringing Hope to Life Radiothon (CJOB Radio, 680AM, Winnipeg, Manitoba, Canada, January 29, 2016).
30. **CR Figley.** "Advice to new faculty members: Views, experiences and hindsight from someone two years in." University of Manitoba New Faculty Orientation (Winnipeg, Manitoba, Canada, July 09, 2015).

31. **CR Figley.** "Introduction to neuroscience & biomedical engineering: Research and career opportunities." West Kildonan Collegiate (Winnipeg, Manitoba, Canada, June 05, 2015).
32. **CR Figley.** "Advanced MRI methods for imaging brain structure and function." University of Manitoba Biomedical Engineering Seminar Series (Winnipeg, Manitoba, Canada, October 23, 2014).
33. **CR Figley.** "A day in the life of an assistant professor: a neuroscientist and wannabe-biomedical engineer's perspective." University of Manitoba Biomedical Engineering Student Society (Winnipeg, Manitoba, October 16, 2014).
34. **CR Figley.** "Advanced magnetic resonance imaging: Methods and applications." University of Winnipeg, Department of Physics (Winnipeg, Manitoba, April 02, 2014).
35. **CR Figley.** "Basic introduction to magnetic resonance imaging (MRI)." Department of Psychological and Brain Sciences, Johns Hopkins University (Baltimore, Maryland, January 07, 2013).
36. **CR Figley.** "Alternative careers in chemistry: Biomedical engineering, medical physics and neuroscience." Grade 12 Chemistry (Marion Graham Collegiate, Saskatoon, Saskatchewan, Canada, November 19, 2010).
37. **CR Figley.** "A tutorial on fMRI time-series and impulse response functions: hemodynamic and cellular changes following enhanced neuronal activity in the brain and spinal cord." Centre for Neuroscience Studies, Graduate Student Seminar Series (aka "The Friday Fights") (Queen's University, Kingston, Ontario, Canada, March 20, 2009).
38. **CR Figley.** "Understanding k-space and fMRI preprocessing." Absolute Beginner's Guide to fMRI at Queen's (Queen's University, Kingston, Ontario, Canada, June 24, 2008)

ETHICS PROTOCOLS:

1. **CR Figley, M Essig, J Kornelsen, L Ryner, and P Barrette.** "Pulse sequence development, experimental design and pilot data collection on three recently acquired Siemens and Siemens/IMRIS 3T MRI Systems at the University of Manitoba." University of Manitoba Biomedical Research Ethics Board (BREB) – Approval #B2013:167 (2013-2023).
2. **KM Matsuda, CR Figley, and M Del Bigio.** "Characterizing radiology-pathology correlations: ex vivo MRI and proteomic profiling using multiplex tissue immunoblotting." University of Manitoba Health Research Ethics Board (HREB) – Approval #H2014:010 (2014-2024).
3. **CR Figley, TD Figley.** "Evaluating structural vs. functional connectivity relationships within neurologically-healthy human brain networks." University of

PATENTS AND INTELLECTUAL PROPERTY:

1. DA Figley, CB Figley, **CR Figley**, and SA Figley. United States Patent and Trademark Office Provisional Patent (Number: US60/891,113). “Humidity Monitoring and Alarm System for Unattended Detection of Building Moisture.” Foreign Filing License Granted September 2007.
 - *Involvement: development of moisture measurement protocols; acquisition of baseline data; prototype field-testing*
2. S Younas and **CR Figley**. United States Patent and Trademark Office Provisional Patent (Number: US62/435,311). “Medial Axis Extraction and Tracking of Complex 3D Objects.” Provisional Application Filed December 2016; Full Application Filed December 2017.
 - *Involvement: generation and development of the initial idea; algorithm conception (divide and conquer approach, path finding method, etc.); reduction to practice*

GOVERNMENT REPORTS:

1. **CR Figley**, DA Figley, and V Salares. “Preserved wood as a potential source of arsenic and fungi in the foundation walls of homes.” 4-page summary report prepared for the *Canada Mortgage and Housing Corporation (External Research Program Research Highlights – Technical Series, December 2007)*.
 - *Freely available from the Government of Canada Publications website: <http://publications.gc.ca/pub?id=331904&sl=0>*
2. **CR Figley**, DA Figley, and V Salares. “Preserved wood foundation wall cavity arsenic and mold study.” 22-page research report prepared for the *Canada Mortgage and Housing Corporation (External Research Program Research Report, August 2004)*.
 - *Freely available from the Government of Canada Publications website: <http://publications.gc.ca/pub?id=392105&sl=0>*

OTHER COPYRIGHTED WORKS:

1. UManitoba-JHU Functionally-Defined Human White Matter Atlas
Version 1.0: July 2015 – present
Version 2.0: June 2017 – present
 - *A publically-available probabilistic atlas of human white matter tracts/regions underlying various functionally-connected brain networks, including: the dorsal and ventral Default Mode Networks, left and right Executive Control Networks, and*

anterior and posterior Salience Networks. The atlas comprises group probability maps for each network, as well as each individual tract (i.e., 1-mm isotropic NIFTI images) that are aligned to both the SPM and MRIStrudio ICBM templates. Please see: www.nitrc.org/projects/uofm_jhu_atlas/

2. Producer and co-host of *Brainwaves* (10 one-hour episodes) February 2009 – December 2009
 - A monthly radio program on CFRC 101.9 FM (Kingston, Ontario) that covered a broad range of neuroscience topics spanning basic science, technical developments, and clinical applications (included research highlights and interviews with neuroscience faculty members, postdoctoral fellows, medical residents, and graduate students).

TEACHING, SUPERVISION AND LEADERSHIP ACTIVITIES:

TEACHING (Full Courses)

1. **Diffusion Imaging Workshop** 20 March 2018
University of Manitoba Workshop Instructor
Attendance = 24
2. **Special Topics in Physiology** September 2017 – December 2017
University of Manitoba (PHGY7190) Course Instructor
Attendance = 2
3. **Biomedical Engineering Seminar** June 2014 – present
University of Manitoba (BME7000) Course Coordinator
Attendance = Approx. 30
4. **Functional Neuroimaging Seminar** September 2011 – September 2013
Johns Hopkins University (AS.200.614) Co-Instructor (with P. Laurent)
Attendance = Approx. 20
5. **Cognitive/Systems Neuroscience Colloquium** January 2011 – May 2011
Johns Hopkins University Co-Coordinator (with P. Laurent)
Attendance = Approx. 15
6. **Absolute Beginner's Guide to fMRI** May 2008 – September 2008
Queen's University Coordinator & Instructor
Attendance = Approx. 25
7. **Introductory Chemistry** September 2004 – April 2005
University of Saskatchewan (CHEM110.6) Laboratory Instructor
Attendance = Approx. 35

GUEST LECTURES

1. **Advanced Topics in Physiological Psychology**
University of Winnipeg
Department of Psychology (PSYC 4900.3)
Attendance = Approx. 15
One 1.5-hour lecture (March 2018)
Course Instructor: Dr. Bruce Bolster
2. **Fundamentals of Neuroscience II**
University of Manitoba
IMED Graduate Course (IMED 7102.3)
Attendance = Approx. 10
One 1.5-hour lecture (February 2017)
Course Instructor: Dr. Brent Fedirchuk
3. **Human Brain Imaging Methods**
University of Manitoba
IMED Graduate Course (IMED 7004)
Attendance = Approx. 15
Two 1-hour tutorials (October, 2016)
Course Instructor: Dr. Ji-Hyun Ko
4. **Human Brain Imaging Methods**
University of Manitoba
IMED Graduate Course (IMED 7004)
Attendance = Approx. 15
Two 1-hour lectures (September, 2016)
Course Instructor: Dr. Ji-Hyun Ko
5. **Functional Anatomy**
University of Manitoba
BME Graduate Course (BME 7014.2)
Attendance = Approx. 10
Two 1.5-hour lectures (March, 2015)
Course Instructor: Dr. Bertram Unger
6. **Fundamentals of Neuroscience II**
University of Manitoba
IMED Graduate Course (IMED 7102.3)
Attendance = Approx. 10
Two 1-hour lectures (February 2015)
Course Instructor: Dr. Brent Fedirchuk
7. **Foundations of Medical Imaging**
University of Winnipeg
Department of Physics (PHYS 2503.3)
Attendance = Approx. 30
One 1-hour lecture (April 2014)
Course Instructor: Dr. Melanie Martin

STUDENT AND MEDICAL RESIDENT SUPERVISION (University of Manitoba)

1. **Soumik Farhan**
M.Sc. Candidate
University of Manitoba
Biomedical Engineering Graduate Program
January 2019 – present
Primary Supervisor
2. **Salina Pirzada**
M.Sc. Candidate
University of Manitoba
Dept. of Physiology & Pathophysiology
May 2017 – present
Primary Supervisor

3. **Tiffany Kolesar** January 2017 – present
Ph.D. Candidate
University of Manitoba
Dept. of Physiology & Pathophysiology *Primary Supervisor*
(Co-Supervised by Dr. Jennifer Kornelsen)
(awarded \$35,000/year NSERC Scholarship
September 2017 – September 2020)

4. **Behnoush Mortazavi Moghadam** June 2016 – present
Medical Resident
University of Manitoba
Department of Radiology *Primary Supervisor*

5. **Kevin Solar** September 2015 – August 2017
M.Sc. Candidate
University of Manitoba
Dept. of Physiology & Pathophysiology *Primary Supervisor*
(Co-Supervised by Dr. Jennifer Kornelsen)
(awarded \$17,500/year NSERC Scholarship
May 2016 – May 2017)

** Now a PhD Student (with C. Beaulieu)*
Department of Biomedical Engineering
University of Alberta

6. **Anwar Shatil** September 2014 – May 2017
M.Sc. Candidate
University of Manitoba
Biomedical Engineering Graduate
Program *Primary Supervisor*
(awarded \$15,000/year MGS Scholarship
September 2015 – September 2016)

** Now a Staff Scientist*
Hospital for Sick Children (Toronto)

7. **Sohail Younas** September 2014 – January 2017
M.Sc. Candidate
University of Manitoba
Biomedical Engineering Graduate
Program *Primary Supervisor*
(awarded \$15,000/year MGS Scholarship
September 2014 – September 2016)

** Now a Machine Learning Developer*
Skip The Dishes Inc.

8. **Navdeep Bhullar** January 2014 – June 2017
Medical Resident
University of Manitoba
Department of Radiology *Primary Supervisor*
(awarded \$1,500 PARIM Scholarship
September 2014 – September 2015)

** Now an Assistant Professor*
Department of Radiology
University of Manitoba

GRADUATE STUDENT ADVISORY AND/OR EXAMINATION COMMITTEES
(i.e., In addition to my own students, listed above)

1. **Fatimah Eashour**
M.Sc. Candidate

University of Manitoba
Dept. of Physics and Astronomy
Supervisor: Dr. Stephen Pistorius

September 2017 – present
Thesis Advisory Committee Member
2. **Pei-Shan Wei**
Ph.D. Candidate
University of Manitoba
Dept. of Physics and Astronomy
Supervisor: Dr. Scott King

May 2017 – present
Thesis Defense Chair
3. **Abrar Alhindi**
Ph.D. Candidate
University of Manitoba
Dept. of Human Anatomy & Cell Sciences
Supervisor: Dr. Ji-Hyun Ko

May 2017 – present
Thesis Advisory Committee Member
4. **Tiffany Carther-Krone**
Ph.D. Candidate
University of Manitoba
Dept. of Psychology
Supervisor: Dr. Jonathan Marotta

January 2016 – present
Thesis Advisory Committee Member
5. **Maram Aljuaid**
Ph.D. Candidate
University of Manitoba
Dept. of Human Anatomy & Cell Sciences
Supervisor: Dr. Ji-Hyun Ko

January 2016 – July 2017
Thesis Advisory Committee Member
and Thesis Defense Examiner
6. **Tiffany Kolesar**
M.Sc. Candidate
University of Manitoba
Dept. of Physiology & Pathophysiology
Supervisor: Dr. Jennifer Kornelsen

January 2016 – December 2016
Thesis Advisory Committee Member
7. **Elena Bilevicius**
M.Sc. Candidate
University of Manitoba
Dept. of Physiology & Pathophysiology
Supervisor: Dr. Jennifer Kornelsen

September 2015 – May 2017
Thesis Advisory Committee Member

2. *Executive Oversight Committee
Biomedical Engineering Graduate
Program
University of Manitoba* *September 2014 – present
Member*
3. *Liaison and Outreach Sub-Committee
Biomedical Engineering Graduate
Program
University of Manitoba* *September 2014 – present
Chair*
4. *Research Oversight Committee
Division of Diagnostic Imaging
University of Manitoba and Winnipeg
Health Sciences Centre* *June 2014 – present
Assistant Research Director*
5. *Resident Research Day Committee
Department of Radiology
University of Manitoba* *May 2014 – present
Judge & Assistant Research Director*
6. *Society for Neuroscience (SfN) 2016
Graduate School Fair Committee
Manitoba Neuroscience Network (MNN)* *July 2016 – November 2016
Chair*
7. *Research Coordinator Hiring Committee
Department of Radiology
University of Manitoba* *September 2016 – October 2016
Chair*
8. *Manitoba Neuroscience Network (MNN)
Annual Meeting
University of Manitoba and Winnipeg
Health Sciences Centre* *May 2016 – June 2017
Abstract Reviewer and Poster Judge*
9. *Staff Scientist and Brain Canada Platform
Grant Coordinator Hiring Committee
Department of Radiology
University of Manitoba and Winnipeg
Health Sciences Centre* *July 2015 – January 2016
Chair*
10. *Branding and Website Committee
Neuroscience Research Program
Winnipeg Health Sciences Centre
Kleysen Institute for Advanced Medicine* *December 2014 – December 2015
Member*
11. *Faculty Assessment and Promotions
Committee
Department of Anesthesiology
Queen’s University* *September 2008 – December 2008
Graduate Student Representative*

- | | | |
|-----|--|--|
| 12. | <i>Faculty Recruitment and Hiring Committee
Centre for Neuroscience Studies
Queen's University</i> | <i>September 2006 – September 2007
Graduate Student Representative</i> |
| 13. | <i>Graduate Student Seminar Series
Centre for Neuroscience Studies
Queen's University</i> | <i>September 2006 – September 2007
Organizing Committee Member</i> |
| 14. | <i>Chemistry Student Society (CS²)
Department of Chemistry
University of Saskatchewan</i> | <i>May 2004 – May 2005
Vice-President</i> |

CONFERENCE, WORKSHOP, AND SYMPOSIUM ORGANIZING/STEERING COMMITTEES

- | | | |
|----|---|--|
| 1. | <i>Brain Canada Manitoba Neuroimaging Platform - Diffusion MRI Workshop</i> | <i>December 2017 – March 2018
Workshop Co-Chair</i> |
| 2. | <i>40th Canadian Medical and Biological Engineering Society Conference (CMBEC40) Organizing Committee</i> | <i>July 2016 – June 2017
Conference Co-Chair</i> |
| 3. | <i>Brain Canada Manitoba Neuroimaging Platform - Neuroimaging Approaches in Research Symposium</i> | <i>June 2016 – October 2016
Symposium Co-Chair</i> |
| 4. | <i>University of Manitoba Biomedical Engineering Conference (BioMedCon) Organizing Committee</i> | <i>July 2015 – December 2015
Conference Co-Chair</i> |

PROFESSIONAL DEVELOPMENT AND TRAINING:

- | | | |
|----|---|---------------------------------------|
| 1. | <i>Academic Health Sciences Leadership (AHSL) Program; George and Fay Yee Centre for Healthcare Innovation, University of Manitoba and Winnipeg Regional Health Authority</i> | <i>September 2016 – February 2017</i> |
| 2. | <i>2-Day Resting State and Brain Connectivity Workshop; Medical University of Vienna</i> | <i>19/20 September 2016</i> |
| 3. | <i>Academic Career Advancement in the Faculty of Health Sciences Workshop; University of Manitoba</i> | <i>26 January 2016</i> |
| 4. | <i>Compute Canada Data Visualization (ParaView) Workshop; University of Manitoba</i> | <i>01 December 2015</i> |

5. *Faculty Teaching Improvement Programs (TIPs) 2-Day Intensive Workshop; University of Manitoba* 19-20 November 2015
6. *Training: Intro to Surgery & Post-Operative Care Wet Lab University of Manitoba Animal User Training Program* 23 April 2014
7. *Training: Rodent Anesthesia and Analgesia Wet Lab University of Manitoba Animal User Training Program* 16 April 2014
8. *Training: Introductory Rodent Wet Lab University of Manitoba Animal User Training Program* 10 April 2014
9. *Training: Research Animal User Training Course University of Manitoba Animal User Training Program* 24 March 2014
10. *Academic Promotion & Career Advancement Workshop University of Manitoba Faculty of Medicine* 12 February 2014
11. *Training: Philips MRI Scanner Operator (research only) FM Kirby Center for Functional Brain Imaging* February 2012 – March 2012
12. *Faculty and Leadership Skills in Academia Johns Hopkins University (AS.360.690)* 23-26 January 2012
13. *SPM8 Functional Connectivity Analysis Workshop Johns Hopkins Medical Institutes* 12-16 December 2012
14. *AFNI Data Analysis Bootcamp National Institutes of Health* 21-25 February 2011
15. *MRI and DTI Studio Workshop Johns Hopkins University* 27-28 September 2010
16. *International School on Magnetic Resonance and Brain Function Erice, Sicily* 25-30 May 2009

PEER REVIEW ACTIVITIES

GRANT REVIEW PANELS/COMMITTEES

1. **Research Manitoba** February 2018 – February 2020
Operating Grants Committee Member
Country: Canada
Program: Biomedical Operating Grants

2. **Research Manitoba** *February 2018 – February 2020
Trainee Awards Committee Member*
Country: Canada
Program: Natural Sciences and Engineering
Trainee Awards

3. **Multiple Sclerosis Society of
Canada (MSSC)** *October 2016 – February 2020
Personnel Awards Committee Member*
Country: Canada
Program: Personnel Awards
(Scholarships and Fellowships)

4. **Canadian Institutes of Health Research
(CIHR)** *December 2017 – March 2018
Scholarships & Awards Committee
Member*
Country: Canada
Program: Institute of Neurosciences, Mental
Health and Addiction – Brainstar Awards
(Scholarships and Awards)

5. **Ontario Research Fund (ORF)** *January 2017 – April 2017
Grant Review Committee Member*
Country: Canada
Program: Large Infrastructure Fund

6. **Heath Sciences Centre Foundation (HSCF)** *February 2016 – June 2016
Grant Review Committee Member*
Country: Canada
Program: General Operating Grants

AD HOC GRANT REVIEWS

1. **NSHRF (Nova Scotia Health Research
Foundation)** *December 2017 – February 2018
External Grant Reviewer*
Country: Canada
Program: Research Nova Scotia Trust
Research Theme: Life Sciences

2. **FWF (Austrian Science Fund)** *January 2016 – February 2016
External Grant Reviewer*
Country: Austria
Program: Erwin Schrodinger Fellowships (ESF)
Research Theme: Interdisciplinary Sciences

3. **HFSP (Human Frontier Science Program)** *November 2015 – December 2015
External Grant Reviewer*
Region: Global

Program: Career Development Awards (CDA)
Research Theme: Life Sciences

4. **MITACS (Mathematics of Information Technology and Complex Systems)** May 2015
External Grant Reviewer

Country: Canada
Program: MITACS Accelerate Awards
Research Theme: Industry-Partnered Fellowships

5. **ANR (L'Agence Nationale de la Recherche)** March 2013
External Grant Reviewer
(French National Research Agency)

Country: France
Program: BLANC (Evaluation Panel SVSE5)
Research Theme: Physics, Chemistry and Biotechnological Innovation

AD HOC JOURNAL REVIEWS

- | | |
|---|---------------------------|
| 1. <i>Brain and Behavior</i>
(2017 Impact Factor = 2.22) | 1 Review
(2019) |
| 2. <i>NeuroImage</i>
(2016 Impact Factor = 5.84) | 2 Reviews
(2018, 2019) |
| 3. <i>Current Medical Imaging Reviews</i>
(2016 Impact Factor = 0.31) | 1 Review
(2018) |
| 4. <i>Human Brain Mapping</i>
(2015 Impact Factor = 4.96) | 2 Reviews
(2017, 2017) |
| 5. <i>Medical and Biological Engineering & Computing</i>
(2016 Impact Factor = 1.92) | 1 Review
(2017) |
| 6. <i>The Anatomical Record</i>
(2016 Impact Factor = 1.43) | 1 Review
(2017) |
| 7. <i>PLoS ONE</i>
(2011 Impact Factor = 4.09) | 2 Reviews
(2012, 2017) |
| 8. <i>Obesity Journal</i>
(2015 Impact Factor = 3.61) | 1 Review
(2016) |
| 9. <i>Journal of Magnetic Resonance Imaging</i>
(2015 Impact Factor = 3.25) | 1 Review
(2016) |
| 10. <i>Frontiers in Human Neuroscience</i>
(2013 Impact Factor = 2.90) | 2 Reviews
(2014, 2016) |

- | | |
|--|--------------------|
| 11. <i>Magnetic Resonance Imaging</i>
(2013 Impact Factor = 2.02) | 1 Review
(2014) |
| 12. <i>BMC Neuroscience</i>
(2012 Impact Factor = 3.00) | 1 Review
(2013) |
| 13. <i>Schizophrenia Bulletin</i>
(2012 Impact Factor = 8.49) | 1 Review
(2013) |

AD HOC CONFERENCE ABSTRACT/PROCEEDING REVIEWS

- | | |
|--|----------------|
| 1. <i>Canadian Medical and Biological Engineering Conference (CMBEC)</i> | 2017 - present |
| 2. <i>Manitoba Neuroscience Network (MNN) Annual Meeting</i> | 2016 - present |
| 3. <i>Organization for Human Brain Mapping (OHBM)</i> | 2011 - present |
| 4. <i>University of Manitoba Biomedical Engineering Conference (BioMedCon)</i> | 2015 - 2016 |
| 5. <i>International Society for Magnetic Resonance in Medicine (ISMRM)</i> | 2009 - 2010 |

FACULTY of 1000 (post-publication review and commentary)

- | | |
|----------------------|----------------|
| 1. <i>NeuroImage</i> | 2012 - present |
| 2. <i>Neuron</i> | 2012 - present |

PROFESSIONAL AFFILIATIONS:

- | | |
|---|--------------------------|
| 1. <i>Faculty of 1000 (F1000)</i>
<i>Associate Faculty Member</i> | June 2012 - present |
| 2. <i>American Society for Neurochemistry (ASN)</i>
<i>Postdoc/Faculty Member</i> | February 2012 - present |
| 3. <i>Society for Neuroscience (SfN)</i>
<i>Postdoc/Faculty Member</i> | September 2011 - present |
| 4. <i>Organization for Human Brain Mapping (OHBM)</i>
<i>Student/Postdoc/Faculty Member</i> | January 2008 - present |
| 5. <i>International Society for Magnetic Resonance in Medicine (ISMRM)</i>
<i>Student/Postdoc/Faculty Member</i> | September 2005 - present |

REFERENCES:

References can be made available upon request. Please email chase.figley@umanitoba.ca if you are interested.