

## **Nafisa M. Jadavji, PhD**

Assistant Professor  
Midwestern University  
Phone: 623-572-3665  
Fax: 623-572-3647  
E-mail: [njadav@midwestern.edu](mailto:njadav@midwestern.edu)  
Website: [www.jadavjilab.com](http://www.jadavjilab.com)

### **EDUCATION**

- Ph.D. Department of Human Genetics, McGill University, 2012  
Dissertation: *Impact of genetic and nutritional disturbances in one-carbon metabolism on brain function and structure in mice*
- M.Sc. Department of Neuroscience, University of Lethbridge, 2008
- B.Sc. Department of Neuroscience, University of Lethbridge, 2006

### **PROFESSIONAL APPOINTMENTS & EXPERIENCE**

- 2022 – present Assistant Research Professor, Department of Child Health, College of Medicine – Phoenix, University of Arizona, Phoenix Children’s Hospital
- 2019 – present Assistant Professor, College of Graduate Studies, College of Veterinary Medicine, College of Osteopathic Medicine, Midwestern University
- 2019 – present Research Assistant Professor, Carleton University
- 2018 – 2019 Associate Scientist, Ottawa Research Hospital Research Institute, University of Ottawa
- 2015 – 2018 Postdoctorate, Department of Neuroscience, Carleton University  
Department of Cellular and Molecular Medicine, University of Ottawa
- 2016 – 2018 Research Lead, Bowen & Associates
- 2013 – 2014 Postdoctorate, Department of Experimental Neurology, German Center for Neurodegenerative Diseases, Partner Site Berlin, Charité University Medicine

## RESEARCH ACTIVITIES

### Peer-Reviewed Publications (h-index = 21)

Graduate and undergraduate trainees are *italicized*, \*denotes corresponding author, +denotes shared first authorship, IF = impact factor

- 2022 *Clementson M, Hurley L, Coonrod S, Bennett C, Marella P, Pascual AS, Pull K, Wasek B, Bottiglieri T, Malysheva O, Caudill M, **Jadavji NM*** . Maternal dietary deficiencies in folates or choline during pregnancy and lactation worsen stroke outcome in 3-month-old male and female mouse offspring, *Neural Regeneration Research: In Press* (IF = 6.058)
- 2022 *Viridi S, **Jadavji NM**\** The impact of maternal folates on brain development and function after birth. *Metabolites* 12(9): 876 (IF = 5.581) (Invited).
- 2022 *Poole J, Jasbi J, Pascual AS, North S, Kwatra N, Weissig V, Gu H, Bottiglieri T, **Jadavji NM**\**. Ischemic stroke and dietary vitamin B12 deficiency in old-aged females impaired motor function, increased ischemic damage size, and changed metabolite profiles in brain and cecum tissue. *Nutrients*, 14(14), 2960; <https://doi.org/10.3390/nu14142960>. (IF = 6.076)
- 2022 Shirinian M, Chen C, Ushida S, **Jadavji NM**\*. Editorial: The Role of Epigenetics in Neuropsychiatric Disorders. *Frontiers in Molecular Neuroscience. In Press*. DOI 10.3389/fnmol.2022.985023
- 2022 *Sarabipour S<sup>+</sup>, Hainer SJ<sup>+</sup>, Furlong E<sup>+</sup>, **Jadavji NM**<sup>+</sup>, de Winde CM, Bielczyk N, Shah AP*. Writing an effective and supportive recommendation letter. *The FEBS Journal* 289: 298-307. PMID: 33665964. (IF = 4.267)
- 2022 Sarabipour S, Hainer SJ, Arslan FN, Winde CM, Furlong E, Bielczyk N, **Jadavji NM**, Shah AP, Davla S, Asby N: Building and sustaining mentor interactions as a mentee. *The FEBS Journal*:289: 1374-1384. PMID: 33818917. (IF = 4.267)
- 2021 Rando HM, Wellhausen N Ghosh, Dattoli AA, Hu F, Lee AJ, Rafizadeh DN, Byrd JB, Qi Y, S Y, Field JM, Guebila MB, **Jadavji NM**, Lordan R, Shelly AN, Brueffer C, Wang J, Goel RR, Park YS COVID-19 Review Consortium, Boca SM, Gitter A, Greene CS. Identification and Development of Therapeutics for COVID-19. *mSystems*. 6(6): e000233-32
- 2021 Lordan R, Rando HM, COVID-19 Review Consortium (**Jadavji NM**) Greene CS. Dietary Supplements and Nutraceuticals under Investigation for COVID-19 Prevention and Treatment. *mSystems*. 6(3): e00122-21

- 2021 Auer S, Haelterman NA, Weissgerber TL, Erlich JC, Susilaradeya D, Julkowska M, Gazda MA, Reproducibility for Everyone Team, Schwessinger B\*, **Jadavji NM\*** Reproducibility for everyone: a community-led initiative with global reach in reproducible research training. *eLife*: [https://elifesciences.org/articles/64719?fbclid=IwAR0VM94vkMqJldb26rJvjGmj7DQ-ifr0gds1cC1YNu-Pq74F42HUeCON6\\_I#content](https://elifesciences.org/articles/64719?fbclid=IwAR0VM94vkMqJldb26rJvjGmj7DQ-ifr0gds1cC1YNu-Pq74F42HUeCON6_I#content) (IF = 7.080)
- 2021 Bennett C, Green J, Ciancio M, Goral J, Pitstick L, Pytynia M, Meyer A, Kwatra N, **Jadavji NM\***. Dietary folic acid deficiency impacts hippocampal morphology and cortical acetylcholine metabolism in adult male and female mice. *Nutritional Neuroscience*: 25:2057-2065. (IF = 5.0).
- 2021 Yahn GB, Leoncio J, **Jadavji NM\*** The role of dietary supplementation of one-carbon metabolism on stroke outcome. *Current Opinion in Clinical Nutrition and Metabolic Care*: doi: 10.1097/MCO.0000000000000743 PMID: 33631772. (IF = 1.521) (invited)
- 2021 de Winde CM, Sarabipour S, Carignano H, Davla D, Eccles D, Hainer SJ, Haidar M, Iiangovan V, **Jadavji NM**, Kritsiligkou, Lee TY Olafsdottir, Symmons O. Towards inclusive funding practices for early career researchers. *Journal of Science Policy and Governance*, 18(1): [https://www.sciencepolicyjournal.org/article\\_1038126\\_jspg180105.html](https://www.sciencepolicyjournal.org/article_1038126_jspg180105.html)
- 2021 Yahn GB, Abato JE, **Jadavji NM\***. Role of vitamin B12 deficiency in ischemic stroke risk and outcome. *Neural Regen Res*.16(3):470-474. PMID: 32985467. PMCID: PMC79986019. (IF = 5.135).
- 2021 Al Rubaye H, Adamson C, **Jadavji NM\***. The role of maternal diet on offspring gut microbiota development. *Journal of Neuroscience Research*. 99:284-93. PMID: 32112450. (IF = 4.139)
- 2020 Burgess K, Bennett C, Mosnier H, Kwatra N, Bethel B, **Jadavji NM\***. The antioxidant role of one-carbon metabolism on stroke. *Antioxidants*. 9(11):1141 PMID: 33212887. PMCID: PMC7698340. (invited) (IF = 7.675)
- 2020 Fernandes JD, Sarabipor A, Smith CT, Niemi NM, **Jadavji NM**, Kozik AJ, Holehouse AS, Pejaver V, Symmons O, Filho AWB, Haage A. Research Culture: A survey-based analysis of the academic job market. *eLife*. 9: e54097 PMID: 32530420. PMCID: PMC7360372. (IF = 7.551)
- 2020 Abato JE, Mofteh M, Cron GO, Smith PD, **Jadavji NM\***. Methylene tetrahydrofolate reductase deficiency alters cellular response after ischemic stroke in male mice. *Nutritional Neuroscience*. 25:558-566. PMID: 32448097 (IF = 5.0).

- 2020 *Van Benthem K, Corker C, Inoue J, Adi MN, **Jadavji NM\***, The changing postdoc and key predictors of satisfaction with professional training. *Studies in Graduate and Postdoctoral Research*. 11:123-142.*
- 2019 **Jadavji NM\***, *Mosnier H, Kelly E, Lawrence K, Cruickshank S, Stacey S, McCall A, Dhatt S, Arning E, Bottiglieri T, Smith PD. One-carbon metabolism supplementation improves outcome after stroke in aged male MTHFR-deficient mice. *Neurobiology of Disease*. 132: 104613. PMID: 31525435. (IF = 5.227).*
- 2019 Wilson LA, Murphy MSQ, Ducharme R, Denize K, **Jadavji NM**, Potter B, Little J, Chakraborty P, Hawken S, Wilson K (2019) Postnatal gestational age estimation via newborn screening analysis: application and potential. *Expert Review of Proteomics*. 16:727-31. PMID: 31422714. PMCID: PMC6816481. (IF = 3.48) (invited)
- 2019 Kroenberg G, Gertz K, *Uhlemann R, Kirste I, An J, **Jadavji NM**, Schott BH, Endres M, Hellweg R, Harms C (2019) Reduced hippocampal neurogenesis in mice deficient in apoptosis repressor with caspase recruitment domain (ARC). *Neuroscience*. <https://doi.org/10.1016/j.neuroscience.2019.07.032> PMID: 31356897. (IF = 3.502).*
- 2019 *Murray LK, **Jadavji NM\*** (2019). The role of B-vitamin metabolism in Parkinson's disease onset, pathology, and mechanisms. *Nutrition Research Reviews*. 32: 218-230. PMID: 31303188. (IF = 4.586).*
- 2019 *Moftah M, **Jadavji NM\*** The role of behavioral training in reducing functional impairments after stroke. *Neural Regeneration Research*. 14:1507-08. PMID: 31089041. PMCID:PMC 6557093. (IF = 6.058). (invited).*
- 2019 **Jadavji NM\***, *Murray LK, Emmerson JT, Rudyk CA, Hayley S, Smith PD. A genetic deficiency in one-carbon metabolism increases oxidative stress in a mouse model of Parkinson's disease. *Toxicological Sciences*. 169:25-33. PMID: 22521626. PMCID: PMC6484892. (IF = 4.398).*
- 2019 *Prieur E, **Jadavji NM\***. Assessing spatial working memory using the spontaneous y-maze alternation test in mice. *Bio Protocols*, 9:1-10. PMID: 33654968. PMCID: PMC7854095.*
- 2018 **Jadavji NM\***, *Emmerson JT, Shanmugalingam U, Willmore WG, MacFarlane AJ, Smith P. MTHFR-deficiency increases vulnerability to stroke: *in vitro* and *in vivo*. *Experimental Neurology*. 309:14-22. PMID: 30055159. (IF = 4.483).*
- 2018 *Murray LK, Smith MJ, **Jadavji NM\***. Maternal over supplementation with folic acid and its impact on neurodevelopment of offspring. *Nutrition Reviews*. 76:708-721. PMID: 30010929. (IF = 5.54).*

- 2018 *Zhang M<sup>†</sup>, Jadavji NM<sup>†\*</sup>, Yoo HS, Smith PD.* Human GDF-11 counteracts age-related short-term memory impairments in middle-aged mice. *Behavioural Brain Research*, 341:45-49. PMID: 29253511. (IF = 3.002).
- 2017 **Jadavji NM\***. The integrated stress response is not a target for diffuse white matter injury in premature infants. *Journal of Neuroscience*, 37: 11772-1173. PMID: 29212946. (IF = 5.924)
- 2017 *Prieur EAK, Pjetri E, Ziesel S, Jadavji NM\**. BHMT-deficiency results in brain atrophy and impairs memory in mice. *Applied Physiology, Nutrition, and Metabolism*, 42:1228-1231. PMID: 28715642. (IF = 3.445).
- 2017 *Emmerson JT, Murray LK, Jadavji NM\**. Impact of one-carbon metabolism on neural recovery. *Neural Regeneration*, 12: 1-2. PMID: 28852387. (invited). PMCID: PMC5558484. (IF = 6.058).
- 2017 **Jadavji NM\***, *Emmerson JE, Willmore WG, MacFarlane AJ, Smith PD.* B-vitamin and choline supplementation increases neuroplasticity and recovery after stroke. *Neurobiology of Disease*, 103:89-100. PMID: 28396257. (IF = 5.624).
- 2017 *Bahous R, Jadavji NM, Deng L, Cosin-Tomas M, Lu J, Malysheva O, Leung KY, Ho MK, Pallas M, Kaliman P, Greene NDE, Bedell BJ, Caudill MA, Rozen R.* High dietary folate in pregnant mice leads to pseudo-MTHFR deficiency and altered methyl metabolism, with embryonic growth delay and short-term memory impairment in offspring. *Human Molecular Genetics*, 26:888-900. PMID: 28069796. PMCID: PMC5409086. (IF = 5.571).
- 2017 *Dam K, Füchtmeier M, Farr TD, Boehm-Strum P, Foddiss M, Dirnagl U, Jadavji NM\**. Deficiencies in methylenetetrahydrofolate reductase and dietary folic acid alter choline metabolism during chronic hypoperfusion. *Behavioral Brain Research*, 321:201-208. PMID: 28087280. (IF = 3.002).
- 2016 *Koturbash I, Jadavji NM, Kutanzi K, Rodriguez-Juarez R, Kogosov D, Metz G, Kovalchuk, O.* Fractionated low-dose exposure to ionizing Radiation Leads to DNA Damage, Epigenetic Dysregulation, and Behavioral Impairment. *Environmental Epigenetics*, 2:1-13. PMID: 29492301. PMCID: PMC5804539.
- 2016 *Grummisch JA, Jadavji NM, Smith PD.* The pleiotropic effects of tissue plasminogen activator (tPA) in the brain: implications for stroke recovery. *Neural Regeneration Research*, 11: 1401-2. PMID: 27482209. PMCID: PMC5090832. (invited). (IF = 5.135).
- 2016 *Emmerson JT, Jadavji NM\**. Impact of maternal folic acid deficiencies on early childhood neurological development. *Journal of Pediatric Reviews*, 4: e6174 (invited).

- 2016 *Shanmugalingam U, **Jadavji NM**, Smith PD.* Role of granulocyte macrophage colony stimulating factor in regeneration of the central nervous system. *Neural Regeneration Research*,11: 902-903. PMID: 27482209. PMCID: PMC4962578. (IF = 6.058). (invited).
- 2016 *Grummisch JA, **Jadavji NM**, Smith PD.* Tissue plasminogen activator promotes cell survival *in vitro* during early postnatal neuronal development via Janus kinase 2- and mammalian target of rapamycin-dependent mechanisms. *Cellular and Molecular Neuroscience*, 74: 25-33. PMID: 26995507. (IF = 3.843).
- 2016 *Theoret JK<sup>+</sup>, **Jadavji NM<sup>+</sup>**, Zhang M, Smith PD.* Stroke-induced expression of GM-CSF receptor following white matter damage: implications for targeted stroke therapy via activation of mTOR signaling pathway. *European Journal of Neuroscience*, 43:17-24. PMID: 26474338. (IF = 3.753).
- 2015 **Jadavji NM**, Malysheva O, Caudill MA, Rozen R. MTHFR deficiency or reduced intake of folate or choline in pregnant mice results in impaired short-term memory and increased apoptosis in hippocampus in wild-type offspring. *Neuroscience*, 300: 1-9. PMID: 25956258. (IF = 3.327)
- 2015 **Jadavji NM\***, Wieske F, Dirgnal U, Winter C. Methylenetetrahydrofolate reductase deficiency alters levels of monoamine neurotransmitters, glutamate and gamma aminobutyric acid in brain tissue. *Molecular Genetics and Metabolism and Genetics Reports*, 3:1-4. PMID: 26937386.PMCID: PMC4750636.
- 2015 **Jadavji NM\***, Farr TD, Lips L, Khalil A, Boehm-Sturm P, Harms C, Foddiss M, Füchtemeier M, Dirnagl. Elevated levels of homocysteine, deficiencies in folic acid and uracil-DNA glycosylase impair learning in a mouse model of vascular cognitive impairment. *Behavioural Brain Research*, 283: 215-226. PMID: 2565513. (IF = 3.002).
- 2014 **Jadavji NM**, Bahous R, Deng L, Wang XL, Malysheva O, Caudill MA, Bedell BJ, Rozen R. A mouse model for genetic variation in methionine synthase reductase exhibits mild hyperhomocysteinemia, short-term memory impairment and biochemical changes in hippocampus. *Biochemical Journal*, 461:205-12.. PMID: 24800750. (IF = 4.396)
- 2012 **Jadavji NM**, Deng L, Leclerc D, Malysheva O, Caudill MA, Bedell BJ, Rozen R. Methylenetetrahydrofolate reductase deficiency in mice impairs motor and cognitive function, with morphological and neurobiochemical changes in cerebellum and hippocampus. *Molecular Genetics and Metabolism*, 106:149-159 PMID: 22521626. (IF = 3.774).
- 2011 **Jadavji NM**, Supina RD, Metz GA. Blocking glucocorticoid and mineralocorticoid receptors neutralizes motor function impairment associated with stress. *Neuroendocrinology*, 94:278-90. PMID:22024815. (IF = 4.373).

- 2009 Zucchi FCR, Kirkland SW, **Jadavji NM**, van Waes L, Klein A, Supina R, Metz GA. Predictable stress versus unpredictable stress: a comparison in a rodent model of stroke. *Behavioral Brain Research*, 205:67-75. PMID: 19573561. (IF = 3.002).
- 2009 **Jadavji NM**, Metz GA. Both pre- and post-treatment with experiential therapy is beneficial in 6-OHDA dopamine-depleted rat. *Neuroscience*, 158:373-86. PMID: 19032978. (IF = 3.327).
- 2008 **Jadavji NM**, Metz GA. Sex differences on skilled reaching task in response to stress and recovery from stress. *Behavioral Brain Research*, 195:251-9. PMID: 18840472. PMCID: PMC5222625. (IF = 3.002).
- 2008 Smith LK, **Jadavji NM**, Colwell KL, Pehudoff SK Metz GA. Stress and glucocorticoids accelerate dopaminergic apoptosis and exaggerate motor symptoms in a rat model of Parkinson's disease. *European Journal of Neuroscience*, 27: 2133-2146. PMID: 18412632. (IF = 3.753).
- 2007 **Jadavji NM**, Metz GA. Experiential therapy for Parkinson's disease. *University of Lethbridge Graduate Student Association Conference Proceedings*. 1:62-68.
- 2006 **Jadavji NM**, Kolb B and Metz GA. Enriched environment improves motor function in intact and dopamine-depleted rats: implications for Parkinson's disease. *Neuroscience*, 140: 1127-1138. PMID: 1667892. (IF = 3.327).
- 2005 Metz GA, **Jadavji NM** and Smith LK. Modulation of motor function by stress: a novel concept of the effects of stress and corticosterone on behavior. *European Journal of Neuroscience*, 22: 1190-1200. PMID: 16176362. (IF = 3.753).

### Edited Book

- 2020 **Jadavji NM**, editor. *The Role of Nutrition during Aging: A Handbook for Nutritional Neuroscience*. London, UK: Brain & Life Publishing. Paperback ISBN 9781912533053, eBook ISBN 9781912533060. <https://www.amazon.com/-/e/B083TGR3L5>

### Book chapters

- 2022 *Marella P, Yahn GB, Kang J, **Jadavji NM***. The impact of homocysteine on ischemic stroke and dementia: an updated review of clinical studies and mechanisms in *Advances in Health and Disease*. Nova Science Publishers Inc. p91-109.
- 2022 *Hurley L, Pull K, **Jadavji NM**\** Immunotherapies for Ischemic Stroke. *Immunotherapy: Cancer and Beyond*. Editors: Deshmukh and Lamichhane. (invited).

- 2021 *Clementson M, Jauhal J, **Jadavji NM\**** Dietary B-vitamins deficiencies and maternal over supplementation on neurodevelopment: an updated narrative. *Vitamins and Minerals in Neurological Disorders*. Editor: Colin Martin, Vinood Patel, and Victor Preedy. Elsevier. (invited).
- 2019 *Moftah M, Emmerson JT, **Jadavji NM\**** Linking homocysteine, B-vitamins, and choline to ischemic stroke risk. *Molecular Nutrition Vitamins*. Editor: Vinood Patel. Elsevier. (invited).
- 2017 *Murray LK, Emmerson JT, **Jadavji NM\****. Roles of Folate in Neurological Function. In *Folic Acid: Sources, Health Effects, and Role in Disease*. Nova Publishers Science Inc. p81-104. (invited).
- 2014 **Jadavji NM\***. Betaine and the brain. *Horizons in Neuroscience Research*. Volume 15. Editors: Andreas Costa and Eugenio Villalba. Nova Science Publishers Inc. p225-231 (invited).

## Preprints

- 2022 *Clementson M, Hurley L, Coonrod S, Bennett C, Marella P, Pascual AS, Pull K, Wasek B, Bottiglieri T, Malysheva O, Caudill M, **Jadavji NM*** Maternal dietary deficiencies in folates or choline during pregnancy and lactation worsen stroke outcome in 3-month-old male and female mouse offspring  
<https://www.biorxiv.org/content/10.1101/2022.09.28.509960v1>
- 2022 Pull K, Folk R, *Kang J, Jackson S, Gusek B, Esfandiarei M, **Jadavji NM***. Maternal dietary choline deficiencies during pregnancy and lactation reduce cerebral blood flow in 3-month-old female mice offspring following ischemic stroke to the sensorimotor cortex.  
<https://www.biorxiv.org/content/10.1101/2022.08.23.505040v1>
- 2022 Kozik AJ, Haga A, **Jadavji NM**, Smith CT, Haage A. The US academic job market survives the SARS-COV-2 global pandemic.  
<https://www.biorxiv.org/content/10.1101/2022.05.27.493714v1>
- 2022 *Poole J, Jasbi J, Pascual AS, North S, Kwatra N, Weissig V, Gu H, Bottiglieri T, **Jadavji NM***. Ischemic stroke and dietary vitamin B12 deficiency in old-aged females impaired motor function, increased ischemic damage size, and changed metabolite profiles in brain and cecum tissue.  
<https://www.biorxiv.org/content/10.1101/2022.04.04.487028v2>
- 2021 *Yahn GB, Wasek B, Bottiglieri T, Malysheva O, Caudill MA, **Jadavji NM***. A dietary vitamin B12 deficiency impairs motor function and changes neuronal survival and choline metabolism after ischemic stroke to the sensorimotor cortex in



middle aged male and female mice.  
<https://www.biorxiv.org/content/10.1101/2021.08.17.456684v3>

- 2021 Rando HM, Wellhausen N Ghosh, Dattoli AA, Hu F, Lee AJ, Rafizadeh DN, Byrd JB, Qi Y, S Y, Field JM, Guebila MB, **Jadavji NM**, Lordan R, Shelly AN, Brueffer C, Wang J, Goel RR, Park YS COVID-19 Review Consortium, Boca SM, Gitter A, Greene CS. Identification and Development of Prophylactics and Therapeutics for COVID-19. PMID: 33688554. PMC7941644.  
<https://arxiv.org/abs/2103.02723>
- 2021 *Bennett C*, Green J, Ciancio M, Goral J, Pitsstick L, Pytynia M, Meyer A, *Kwatra N*, **Jadavji NM\***. Dietary folic acid deficiency impacts hippocampal morphology and cortical acetylcholine metabolism in adult male and female mice.  
<https://www.biorxiv.org/content/10.1101/2020.12.13.422535v1>
- 2020 *Auer S*, *Haelterman NA*, Weissgerber TL, Erlich JC, Susilaradeya D, Julkowska M, *Gazda MA*, Reproducibility for Everyone Team, Schwessinger B<sup>#</sup>, **Jadavji NM\***. Reproducibility for everyone: a community-led initiative with global reach in reproducible research training. <https://osf.io/dxw67/>
- 2020 de Winde CM, Sarabipour S, Carignano H, Davla D, Eccles D, Hainer SJ, Haidar M, Ilangovan V, **Jadavji NM**, Kritsiligkou, Lee TY Olafsdottir,. Towards inclusive funding practices for early career researchers.  
<https://doi.org/10.31219/osf.io/9sfm8>
- 2019 *Abato JE*, *Moftah M*, Cron GO, Smith PD, **Jadavji NM**. Methylenetetrahydrofolate reductase deficiency alters cellular ischemic stroke in male mice. <https://www.biorxiv.org/content/10.1101/857938v2>
- 2019 Fernandes JD, Sarabipor A, Smith CT, Niemi NM, **Jadavji NM**, Kozik AJ, Holehouse AS, Pejaver V, Symmons O, Filho AWB, Haage A. Insights from a survey-based analysis of the academic job market.  
<https://www.biorxiv.org/content/10.1101/796466v1>

### Technical reports

- 2016 **Jadavji NM**, Adi MN, Corkery TC, Inoue J, Van Benthem, K. The 2016 Canadian National Postdoctoral Survey Report: An Emerging Shadow Workforce. Canadian Association of Postdoctoral Scholars-L'Association Canadienne de Stagiaires Post-doctoraux.

### Undergraduate Peer Reviewed Publications

- 2019 *Danef MA, **Jadavji NM*** The role of synaptic plasticity in the pathophysiology of cocaine addiction. *Journal of Young Investigators.* 37:33-38. doi:10.22186/jyi.37.4.33-38. \*Nominated Best of JYI.
- 2019 *Radhakrishnan A, **Jadavji NM\**** The effects of vascular cognitive impairment on the thickness of the granular cell layer of the dentate gyrus within the hippocampus in a mouse model. *Journal of Student Science, and Technology.* 11: 16-21. doi: 10.13034/jsst.v11i1.273
- 2019 *Keerthi P, **Jadavji NM.*** B-vitamin and choline supplementation changes the ischemic brain. *Journal of Young Investigators.*36: 44-49. \*Nominated Best of JYI.
- 2018 *Lam K, **Jadavji NM.*** Seeking Happiness: Understanding the mechanism of mixing music and drugs. *Journal of Young Investigators.* 34(5): 31-38. doi:10.22186/jyi.34.5.31-38
- 2017 *El Koussy M, **Jadavji NM.*** Therapeutic potential of optogenetic treatment for Individuals with Multiple Sclerosis. *Journal of Young Investigators.* 33(4); 15-20. doi: 10.22186/jyi.33.4.77-82 \*Nominated Best of JYI.
- 2017 *Milani CM, **Jadavji NM.*** Chronic traumatic encephalopathy: connecting mechanisms to diagnosis and treatment. *Journal of Young Investigators.* 33(4); 21-23. doi: 10.22186/jyi.33.4.83-86. \*Nominated Best of JYI.
- 2017 *Mau KJ, **Jadavji NM.*** A new perspective on Parkinson's disease: pathology begins in the gastrointestinal tract. *Journal of Young Investigators.* 33(4); 1-8. doi:10.22186/jyi.33.4.64-70.
- 2017 *McIntosh A, **Jadavji NM.*** Application of neuroscience principles for evidence-based design in architectural education. *Journal of Young Investigators.* 33(4); 9-14. doi:10.22186.33.4.71-76.
- 2016 *Owens G, Smith PD, **Jadavji NM\***.* Neurogenesis Unchanged by MTHFR Deficiency in Three-Week-Old Mice. *Journal of Young Investigators.* 31(6); 39-43. doi: 10.22186/jyi.31.6.39.
- 2006 **Jadavji NM\***, Armstrong-Esther Chris. A 21<sup>st</sup> century epidemic: childhood obesity in north America. *Journal of Young Investigators.* 15 (2): E-publication.
- 2006 **Jadavji NM\***, Foroud A, Wishaw IQ, Metz GA. Silencing Huntington's chorea: is RNA interference a potential cure? *Impulse an Undergraduate Journal for Neuroscience.* 1: 1-13.

### Papers under review

*Yahn GB, Wasek B, Bottiglieri T, Malysheva O, Caudill MA, **Jadavji NM*** (revision in progress,

*Nutritional Neuroscience*, NNS3036) A dietary vitamin B12 deficiency impairs motor function and changes neuronal survival and choline metabolism after ischemic stroke to the sensorimotor cortex in middle aged male and female mice.

Kozik AJ, Haga A, **Jadavji NM**, Smith CT, Haage A (under review *PLoS One*, *PONE-D-22-19598*) The US academic job market survives the SARS-COV-2 global pandemic.

Pull K, Folk R, *Kang J, Jackson S*, Gusek B, Esfandiarei M, **Jadavji NM** (under review at *Scientific Reports*) Maternal dietary choline deficiencies during pregnancy and lactation reduce cerebral blood flow in 3-month-old female mice offspring following ischemic stroke to the sensorimotor cortex.

### **Extramural Funding**

2021-22 Project: “Faculty Job Market Research,” Burroughs Wellcome Fund, Co-Principal Applicant, \$43,700 USD. Grant Number: 1022092

2020-22 Project: “Identification of developmental factors involved in ischemic stroke outcomes in adulthood and old age,” American Heart Association Research Enhancement Award (AIREA), Principal Applicant, \$187,735.00  
Grant Number: 20AIREA35050015

2016-17 Project: “Canadian Association of Postdoctoral Scholars 2016 National Survey Grant,” Burrough’s Wellcome Fund, Principal Applicant, \$5000 USD

### **Intramural Funding**

2020-21 Project: “Identification of developmental factors involved in ischemic stroke outcomes in adulthood and old age,” Arizona Alzheimer’s Consortium. Principal Applicant, \$8510 USD.

2015-17 Project: “Impact of methylenetetrahydrofolate reductase deficiency on vulnerability to stroke in a mouse model,” Carleton University Development Grant, Co-Applicant, \$9600 CDN

### **Trainee Funding**

2017-18 Project: “The impact of methylenetetrahydrofolate reductase (MTHFR) deficiency in a mouse model of Parkinson's disease,” Canadian Institutes of Health Research (CIHR) Master’s Award, Co-Supervisor, \$17,500 CDN

2017 Project: “Impact of MTHFR deficiency on cell viability and oxidative stress in astrocytes,” Natural Sciences and Engineering Research Council (NSERC): Undergraduate Student Research Award, Undergraduate, Principal Applicant, \$4500 CDN

2016 Project: “Impact of MTHFR deficiency on neuronal mechanisms,” Natural Sciences and Engineering Research Council (NSERC) Undergraduate Student Research Award, Principal Applicant, \$4500 CDN

### **Fellowship Funding**

2015-17 Project: “Impact of MTHFR deficiency on neuronal and astrocyte mechanism,” National Science & Engineering Research Council (NSERC), Principal Applicant, \$90,000 CDN. \*Application Ranked 4/69 for Cellular and Molecular Biology Competition

2016-17 Project: “Impact of genetic and dietary deficiencies in folate metabolism on stroke in a female mouse model”, Council of Ontario Universities Postdoctoral Women’s Health Scholars Fellowship, Principal Applicant, \$45000 CDN

2013-16 Project: “Evaluation of folate metabolism on functional behavioural assessment and mechanism in a animal model of Vascular Cognitive Impairment,” Fonds de la recherché en santé Québec (FRSQ), Principal Applicant, \$135,000 CDN

### **RECOGNITIONS & HONOURS**

2022 1<sup>st</sup> Place Basic Science Research Poster, College of Veterinary Medicine, Phi Zeta Research Day, Lauren Hurley, BS (Graduate Student in Laboratory)

2022 1<sup>st</sup> Place Research Oral Presentation, College of Veterinary Medicine, Phi Zeta Research Day, Lauren Hurley, BS (Graduate Student in Laboratory)

2022 Outstanding Research Award for Graduate Student, Jesse Jauhal MBS (Graduate Student in Laboratory)

2022 2021 Outstanding Associate Editor, Frontiers in Nutrition,

2019 Publons Top Reviewer in Neuroscience and Behavior 2018-19

2018 2<sup>nd</sup> Place Aging and Chronic Disease, Emerging Leaders in Nutrition Science Poster Competition, American Society for Nutrition Meeting, \$200 USD

2018 Finalist, Postdoctoral Competition, American Society for Nutrition Meeting, \$250 USD

2016 Howard Hughes Medical Institute Fellowship: Cold Spring Harbor Scientific Writing Course, \$700 USD

2016 Best Poster Presentation Award (postdoctoral level), FASEB Folic Acid, Vitamin B12, and One-Carbon Metabolism Meeting, Steamboat Springs, \$500 USD

2015 Young Investigator Award, 10<sup>th</sup> International Nutrition and Diagnostics Conference, Prague, CZ

2015 Best Poster Award, Post-doctoral Association, Postdoctoral Research Day, University of Ottawa, Faculty of Medicine, \$100 CDN

- 2011 Honourable Mention, Canadian Institutes of Health Research National Poster Competition
- 2007 1<sup>st</sup> place poster award, Graduate Student Association Multidisciplinary Conference, University of Lethbridge, \$100 CDN

### **Invited Seminars**

- 2022 The impact of dietary vitamin B12 deficiencies on ischemic stroke outcome using a mouse model. Department of Human Biology/Nutrition Science Program. University of Wisconsin Green Bay.
- 2022 Identification of developmental factors involved in ischemic stroke outcomes during adulthood using a mouse model system. Department of Nutrition Seminar. University of Nevada, Reno. Virtual Seminar
- 2022 Does nutrition impact ischemic stroke outcome? Queen's University. Virtual Seminar.
- 2022 Does nutrition impact ischemic stroke outcome? The role of dietary vitamin B12 deficiencies on ischemic stroke in a mouse model. Science Live Stream. Virtual Seminar. <https://www.youtube.com/watch?v=jJA8lzak8as&feature=youtu.be>
- 2021 Bugs, Germs, and Genomes. Youth First Career Panel. Virtual Meeting.
- 2021 Enriched Environment improved motor function in intact and unilateral dopamine depleted rats. American Society of Neurorehabilitation. Virtual Meeting.
- 2021 Does nutrition impact ischemic stroke outcome? The role of one-carbon metabolism deficiencies in a photothrombosis mouse model. City University of New York (CUNY) Neuroscience Seminar.
- 2021 How Nutrition Changes the Aging Brain. Midwestern University Community Lectures
- 2020 Investigating the impact of one-carbon metabolism on ischemic stroke outcome. Faculty of Medicine. Arizona State University. Virtual Seminar.
- 2020 How a genetic MTHFR deficiency and diet impacts onset and progression of ischemic stroke. Perspectives of early-mid career level researchers: Nutrient-gene interactions research interest section forum. Virtual Seminar. <https://nutrition.org/nutrient-gene-interactions-in-complex-diseases/>
- 2020 Investigating the impact of one-carbon metabolism on ischemic stroke outcome. Faculty of Medicine. Arizona State University. \*cancelled due to COVID-19

- 2020 How Nutrition Changes the Aging Brain. Midwestern University Community Lectures \*cancelled due to COVID-19
- 2020 Investigating the impact of one carbon metabolism on ischemic stroke. Behavioral Neuroscience Seminar. Arizona State University.
- 2019 Women in Science. Highland lakes school. US.
- 2019 Does nutrition impact ischemic stroke outcome? The role of one-carbon metabolism in animal models. Midwestern University Downers Grove Campus. US.
- 2019 Understanding the role of one-carbon metabolism in the onset and progression of ischemic stroke. Translational Neurotrauma Research Program. College of Medicine Phoenix. University of Arizona.
- 2019 Introduction to Reproducibility Webinar. *eLife* Ambassador Program. Worldwide. Online
- 2019 Journal of Young Investigators Career Webinar. *Journal of Young Investigators*. Worldwide. Online.
- 2019 Folic Acid and the Brain. Skype a Scientist. John Polanyi Collegiate Institute. Canada.
- 2019 Academic Job Market Webinar. Graduate Women in Science. US.
- 2019 Presenting Your Data at Scientific Meetings Webinar. Canadian Society for Molecular Biosciences. Canada.
- 2019 Does nutrition impact ischemic stroke outcome? Understanding the role of one-carbon metabolism using a mouse model. Department of Behavioral Health and Nutrition. University of Delaware. US.
- 2019 How nutrition changes the aging brain. +50 Active Jewish Adults. Ottawa. Canada.
- 2018 Keeping your brain young. Nutrition makes a difference. Canadian Federation of University Women – Ottawa Chapter. Canada.
- 2018 Understanding the role of one-carbon metabolism in the onset and progression of ischemic stroke. Division of Biomedical Sciences. Midwestern University.
- 2018 Does nutrition impact ischemic stroke outcome? Understanding the role of one-carbon metabolism. Department of Nutrition. University of Memphis.

- 2018 The role of folic acid on neurological function over the lifespan. Pint of Science, Ottawa, Canada.
- 2018 Does nutrition impact stroke outcome? Understanding the role of one-carbon metabolism in ischemic stroke. Department of Chemistry and Biochemistry. University of Windsor, Canada.
- 2018 How does nutrition impact the onset of Parkinson's disease (PD)? Understanding the role of folic acid deficiency in an environmental toxin mouse model of PD. Faculty of Medicine Postdoctoral Association. University of Ottawa.
- 2018 How does nutrition impact stroke outcome? Understanding the role of one-carbon metabolism in a mouse model of stroke. Penn State University.
- 2018 How does nutrition impact stroke outcome? Understanding the role of one-carbon metabolism in ischemic stroke. Memorial University, Canada.
- 2017 How does nutrition impact stroke outcome? Understanding the role of one-carbon metabolism in ischemic stroke using mouse models. Western University, Canada.
- 2018 The aging brain. Department of Pharmacology and Therapeutics, University of Manitoba, Canada.
- 2017 The aging brain and diet. Department of Veterinary Biomedical Sciences, University of Saskatchewan, Canada.
- 2017 Stroke and Homocysteine is there a link? Faculty of Medicine Postdoctoral Association. University of Ottawa, Canada.
- 2017 Impact of Folates and Neurological Function. Department of Nutrition Seminar. University of California, Davis. USA.
- 2016 How folic acid affects the stroke brain in mice. Neurorestoration Seminar. King's College London.
- 2014 Folic Acid and the Brain. Science Café. Carleton University, Ottawa.
- 2015 The impact of genetic deficiencies in folate metabolism on neurodegeneration and stroke in a mouse model. Faculty of Medicine Postdoctoral Association. University of Ottawa.
- 2015 How do deficiencies in folate metabolism affect the brain and behaviour during neurodegeneration and stroke? Health Canada, Bureau of Nutritional Science. Ottawa, Canada.

- 2015 The impact of deficiencies in folate metabolism on neurodegeneration and stroke in a mouse model. Réunion scientifique de l' Axe Neurosciences. Centre hospitalier de l' Université de Montréal.
- 2015 STEM mentorship Mentoring Circles – WISE Transitions and Women in leadership'ful Choices. Women in Science and Engineering Mentorship Program.
- 2015 Impact of elevated levels of plasma homocysteine via deficiencies in folate metabolism in a mouse model of vascular cognitive impairment. Department of Neuroscience Colloquium, Carleton University, Ottawa, Canada.
- 2014 Deficiencies in folic acid and UNG result in learning deficits, and decreased MMP-9 levels in a mouse model of vascular dementia. NeuroCure Seminar, Charité University Medicine, Berlin, Germany.
- 2009 Interactions of Stress and Skilled Motor System Function. Max Planck Institute for Neurological Research. Cologne, Germany.
- 2008 Interactions of Stress and Motor System Function. Université de Montréal.
- 2007 To Be Enriched or Not to Be? Experiential Therapy Improves Motor Function in Intact and Unilateral Dopamine-Depleted Rats. Montreal Neurological Institute McGill University.

#### **Oral Presentations \*selected from abstracts**

- 2022 Pull K, Folk R, Gusek B, Esfandiarei M, **Jadavji NM**. Maternal dietary choline deficiencies reduce cerebral blood flow in three-month-old female mouse offspring following ischemic stroke to the sensorimotor cortex. American Society for Nutrition Annual Meeting (Virtual)
- 2021 Jauhal J, **Jadavji NM**. Maternal dietary deficiencies in folic acid or choline impact stroke outcome in 3-month-old male and female mouse offspring. AZ Physiological Society Meeting. Midwestern University. Glendale, USA.
- 2021 *Yahn GB*, Wasek B, Bottiglieri T, Malysheva O, Caudill MA, **Jadavji NM** (2021) A dietary vitamin B12 deficiency impairs motor function, neuronal survival, and choline metabolism after ischemic stroke to the sensorimotor cortex in adult male and female mice. 13th International Conference One-Carbon Metabolism, B Vitamins and Homocysteine. Hybrid.
- 2018 **Jadavji NM**, *Murray LK*, *Rudyk C*, Hayley S, Smith PD. MTHFR deficiency increases vulnerability to environmental toxin model of Parkinson's disease. American Society for Nutrition. Boston, USA. \*Finalist for Postdoctoral Research Award Competition



- 2016 *Bahous RH, **Jadavji NM**, Cosín-Tomás M, Deng L, Lu J, Malysheva O, Pallàs M, Kaliman P, Caudill MA, Rozen R. High dietary folate during pregnancy leads to pseudo-MTHFR deficiency, changes in choline metabolites, altered gene expression and short-term memory impairment in offspring. FASEB Folic Acid, Vitamin B12, and One-Carbon Metabolism Meeting, Steamboat Springs, USA.*
- 2015 **Jadavji NM**, *Khalil AA, Harms C, Farr TD, Boehm-Sturm P, Lips J, Foddìs M, Dam K, Fùchtemeier M, Malysheva O, Caudill MA, Dirnagl U. Using a mouse model of vascular cognitive impairment to determine whether elevated levels of homocysteine affect onset and progression. International Nutrition and Diagnostics Conference. Prague, CZECH REPUBLIC. \*Young Investigator Award*

### **Selected abstracts of poster presentations from past 5 years**

- 2022 Hurley L, Clementson M, Coonrod S, Bennett C, Pull K, Pascual A, Wasek B, Bottiglieri T, Malysheva O, Marie A. Caudill MA, **Jadavji NM** (2022) Maternal dietary deficiencies during pregnancy and lactation in folic acid or choline impact stroke outcome in 3-month-old mouse offspring. FASEB: The Folate, Vitamin B12, and One-Carbon Metabolism Conference. Asheville, NC, USA
- 2022 *Coonrod S, **Jadavji NM**. The impact of maternal dietary deficiencies in folic acid and choline on offspring neuronal function after hypoxia. Experimental Biology. Philadelphia.*
- 2021 *Clementson M, Hurley L, Coonrod S, Bennett C, Pull K, Pascual A, Wasek B, Bottiglieri T, Malysheva O, Marie A. Caudill MA, **Jadavji NM** Maternal dietary deficiencies in folic acid or choline impact stroke outcome in 3-month-old male and female mouse offspring. AZ Physiological Society Meeting. Midwestern University.*
- 2021 Coonrod S, **Jadavji NM** The impact of maternal dietary deficiencies in folic acid and choline on offspring neurological health *in vitro* and *in vivo*. National Veterinary Scholars Symposium. Virtual.
- 2021 *Poole J, Pascual AS, North S, Weissig V, Gu H, **Jadavji NM** The role of vitamin B12 deficiency on stroke outcome and mechanisms in old-aged female mice. Arizona Alzheimer's Scientific Conference. Virtual/In Person*
- 2021 Yahn GB, Wasek B, Bottiglieri T, **Jadavji NM** A dietary vitamin B12 deficiency impairs balance and coordination after ischemic injury to the sensorimotor cortex in adult male and female mice. Kenneth Saurez Research Day. Midwestern University. Virtual
- 2021 *Bennett C, Green J, Ciancio M, Goral J, Pitstick L, Pytynia M, Meyer A, Kwatra N, **Jadavji NM**. Dietary folic acid deficiency impacts hippocampal morphology and*

cortical acetylcholine metabolism and apoptosis in a sex dependent manner in adult male and female mice. Organization of Sex Differences Meeting. Virtual

- 2021 *Bennett C, Green J, Ciancio M, Goral J, Pitstick L, Pytynia M, Meyer A, Kwatra N, Jadavji NM.* Dietary folic acid deficiency impacts hippocampal morphology and cortical acetylcholine metabolism in adult male and female mice. Kenneth Saurez Research Day. Midwestern University. Virtual
- 2021 *Yahn GB, Wasek B, Bottiglieri T, Jadavji NM* A dietary vitamin B12 deficiency impairs balance and coordination after ischemic injury to the sensorimotor cortex in adult male and female mice. American Society for Nutrition Annual Meeting (Virtual meeting)
- 2021 *Yahn GB, Wasek B, Bottiglieri T, **Jadavji NM*** Vitamin B12 deficiency impairs balance and coordination after photothrombotic damage to the sensorimotor cortex in adult male and female mice after ischemic stroke. American Heart Association. International Stroke Meeting. (Virtual meeting)
- 2021 *Yahn GB, Wasek B, Bottiglieri T, **Jadavji NM*** Vitamin B12 deficiency impairs motor function after photothrombotic damage to the sensorimotor cortex in adult male and female mice. Arizona State University BioSci Southwest Symposium. SciCom presentation. (Virtual meeting)
- 2020 *Bennett C, Green J, Ciancio M, Goral J, Pitstick L, Pytynia M, Meyer A, **Jadavji NM*** (2020) Dietary folic acid deficiency impacts hippocampal morphology and cortical acetylcholine metabolism in adult male and female mice. AZ Physiological Society. Tucson. (Virtual meeting)
- 2020 *Mosnier H, Kelly E, Lawrence K, Cruickshank S, Stacey S, McCall A, Dhatt S, Arning E, Bottiglieri T, Smith PD, **Jadavji NM\****. The role of one-carbon metabolism after ischemic stroke in an aged mouse model. American Society for Nutrition. Seattle.
- 2020 *Abato J, Yahn GB, **Jadavji NM***. The role of vitamin B12 deficiency on ischemic stroke risk and outcome. Kenneth A. Suarez Research Day. Midwestern University. Glendale. \*Abstract accepted and published, research day cancelled due to COVID-19
- 2020 Sarabipor A, Fernandes JD, Smith CT, Niemi NM, **Jadavji NM**, Kozik AJ, Holehouse AS, Pejaver V, Symmons O, Filho AWB, Haage A. Insights from a survey-based analysis of the academic job market. American Society for Microbiology. Chicago.
- 2019 *Mosnier H, Kelly E, Lawrence K, Cruickshank S, Stacey S, McCall A, Dhatt S, Arning E, Bottiglieri T, Smith PD, **Jadavji NM***. One-carbon metabolism

supplementation improves outcome after stroke in aged male MTHFR-deficient mice. AZ Physiological Society. Tempe.

- 2019 Fernandes JD, Sarabipor A, Smith CT, Niemi NM, **Jadavji NM**, Kozik AJ, Holehouse AS, Pejaver V, Symmons O, Filho AWB, Haage A. Insights from a survey-based analysis of the academic job market. American Society for Cell Biology. Washington.
- 2019 *Moftah M, Cron GO, Emmerson JT, Willmore WG, Smith PD, **Jadavji NM***. MTHFR-deficiency increases ischemic damage through reduced neuronal and astrocytes viability and changes in the cellular response. American Society for Nutrition. Baltimore.
- 2018 **Jadavji NM, Murray LK, Rudyk C, Hayley S, Smith PD**. MTHFR deficiency increases vulnerability to environmental toxin model of Parkinson's disease. American Society for Nutrition. Boston. \*Finalist for Emerging Leaders in Nutrition Science Poster Competition
- 2018 *Veeraj S, Gosatyla M, **Jadavji NM**, Niewijk G, Mikhael P, Parrino A, Pernik M, Sarmiento N, Sychia A, Waseem MH*. An opportunity for undergraduates to publish in a peer review journal: The Journal of Young Investigators. International Society of Managing and Technical Editors (ISMTE). Maryland.
- 2018 *Murray LK, **Jadavji NM**, Rudyk CA, Hayley S, Smith PD*. The impact of methylenetetrahydrofolate reductase (MTHFR) deficiency in a paraquat mouse model of Parkinson's disease. Brain Health Research Day. Ottawa.
- 2018 *Tawil N, Magnus N, Meehan B, Choi D, Croul S, **Jadavji NM**, Rak J*. Molecular and vascular determinants of escape from dormancy in experimental glioma. American Association for Cancer Research: Cancer Dormancy. Montreal.
- 2018 *Murray LK, **Jadavji NM**, Rudyk CA, Hayley S, Smith PD*. The impact of methylenetetrahydrofolate reductase (MTHFR) deficiency in a paraquat mouse model of Parkinson's disease. 12<sup>th</sup> Annual Canadian Association for Neuroscience Meeting. Vancouver
- 2018 **Jadavji NM, Prieur EAK, Pjetri E, Ziesel S**. Reduced brain volume and impaired memory in betaine homocysteine S-methyltransferase knockout mice. American Society for Nutrition. Boston.
- 2018 *Shanmugalingam U, **Jadavji NM**, Smith PD*. The role of neuronal pentraxin 2 in retinal ganglion cell growth. EMBO Molecular Neurobiology, Heraklion, Greece.

## Science Communication

- 2021 The prevalence and impact of bullying on academics: summary of results from an international survey. <https://www.jadavjilab.com/blog/the-prevalence-and-impact-of-bullying-on-academics-summary-of-results-from-an-international-survey>
- 2021 Surviving my second year on the tenure track during a global pandemic. *Jadavji laboratory Blog*. <https://www.jadavjilab.com/blog/surviving-my-second-year-on-the-tenure-track-during-a-global-pandemic>
- 2021 Mannam S. Interview with Dr. Jadavji. *Journal of Young Investigators*. <https://www.jyi.org/2021-june/2021/6/8/interview-with-dr-nafisa-jadavji>
- 2020 Interview Narrative: Nafisa Jadavji, Assistant Professor. McGill University. Track Report Connect Exchange. <http://tracemcgill.com/nafisa-jadavji/>
- 2019 Powell K. Daunting but doable: Job searching after a postdoc. *Science Magazine*. <https://www.sciencemag.org/features/2020/08/daunting-doable-job-searching-after-postdoc#>
- 2020 Reflections on the first year of a tenure track job: learning to embrace chaos. *Jadavji laboratory Blog*. <https://www.jadavjilab.com/blog/reflections-on-the-first-year-of-a-tenure-track-job-learning-to-embracing-chaos>
- 2020 Kwarta N, Jadavji NM. How changes in our genes impact outcome after stroke. *Atlas of Science*. <https://atlasofscience.org/how-changes-in-our-genes-impact-outcome-after-stroke/>
- 2020 Using social media to enhance your scientific training and reducing social isolation. *Jadavji Lab Blog*. <https://www.jadavjilab.com/blog/archives/04-2020>
- 2020 Learning to teach in academia. *Jadavji Lab Blog*. <https://www.jadavjilab.com/blog/archives/12-2019>
- 2019 Bullying in academia: Tales from victims and a call to action. *ecrLife*. <https://ecrlife.org/bullying-in-academia-theses-from-victims-and-a-call-to-action/>
- 2019 Importance of building a network during postdoctorate training. *Jadavji Lab Blog*. <https://www.jadavjilab.com/blog/archives/09-2019>
- 2019 Respect the hustle: landing a tenure track job in 2019. *Jadavji Lab Blog*. <https://www.jadavjilab.com/blog/respect-the-hustle-landing-a-tenure-track-job-in-2019>
- 2019 CSMB-SCMB Slack Career Profile. New Principal Investigator

- 2019 Twitter Curating: STEM Squad, <https://thestemsquad.org/>
- 2019 Nutrition & Parkinson's disease: is there a link? *American Nutrition Society Blog*. <https://nutrition.org/nutrition-parkinsons-disease-is-there-a-link/>
- 2018 What role does nutrition play on vascular dementia? *American Nutrition Society Blog*. <https://nutrition.org/what-role-does-nutrition-play-on-vascular-dementia/>
- 2018 The role of maternal folic acid supplementation on offspring neurodevelopment. *American Nutrition Society Blog*. <https://nutrition.org/the-role-of-maternal-folic-acid-supplementation-on-offspring-neurodevelopment/>
- 2018 How what you eat affects your brain. *The Addictive Brain*. <https://www.facebook.com/notes/the-addictive-brain/how-what-you-eat-affects-your-brain-nafisa-jadavji/1977391632292770/>
- 2018 Nafisa's top ten tips for oral and poster presentations. *Journal of Young Investigators Blog*. <https://www.jyi.org/blog/2018/6/11/nafisas-top-ten-tips-for-oral-and-poster-presentations>
- 2018 How to choose a postdoc lab. *Graduate Women in Science EMPOWER*. <https://mailchi.mp/gwis/how-to-choose-a-postdoc-lab?e=744f87f042>
- 2018 How does nutrition impact stroke outcome? *American Nutrition Society Blog*. <https://nutrition.org/how-does-nutrition-impact-stroke-outcome/>
- 2018 Visitor of the Week: Nafisa Jadavji. *Current Exchange: A blog by Cold Spring Harbor Laboratory Meetings and Courses*. <https://currentexchange.cshl.edu/blog/2018/4/visitor-of-the-week-53>
- 2018 Folic acid during early brain development is important, but too much is not good. <https://brainandlife.net/2018/03/22/folic-acid-during-early-brain-development-is-important-but-too-much-is-not-good/>
- 2018 Inside the Petri Dish. *Animal Testing Podcast*. <http://itpd.mprw.co.uk/2018/02/>
- 2018 Women in S.T.E.M. Nafisa Jadavji, PhD: Her Careers and a few lessons learned. <https://femstem.com/blog/2018/2/24/nafisa-jadavji-phd-her-career-and-a-few-lessons-learned-nafisa-jadavji>
- 2017 Tip Box Team ABCam. 96 Tips. <https://tipbox.abcam.com/>
- 2017 Folic acid during early neurodevelopment is important, but too much is not good. <https://womaninscienceblog.wordpress.com/2017/11/07/folic-acid-during-early-neurodevelopment-is-important-but-too-much-is-not-good/>

- 2017 Food for thought. Canadian Institutes of Health Research celebrates Canada 150. <http://www.cihr-irsc.gc.ca/e/50395.html>
- 2017 Twitter Curating:  
RealScientists, May. <http://realscientists.org/2017/05/28/food-for-thought-literally-with-nafisa-jadavji/>  
Neurotweeps, April. <https://neurotweeps.wordpress.com/2017/04/>  
Biotweeps, October. <https://biotweep.wordpress.com/2017/10/08/091017-nafisajadavji/>
- 2017 Homocysteine and Dementia: Impact of Nutrition on Neurodegeneration. *AlzScience Bog*. <https://alzscience.wordpress.com/2017/04/22/homocysteine-and-dementia-impact-of-nutrition-on-neurodegeneration/#comments>
- 2017 Women in STEM Profile. <https://laurendrogos.wordpress.com/2017/03/14/nafisa-m-jadavji/>
- 2007 Metz GA, **Jadavji NM**, Colwell KL, Pehudoff SK, Smith LK Stress accelerates neuronal degeneration and exaggerates motor symptoms in the rat model of Parkinson's disease. *Society for Neuroscience: Neuroscience 2007 Press Book*
- 2007 Ali F, Jadavji NM, Ong W, Pandey KR, Patananan AN, Parbhala HK, Yang CHT. Supporting Undergraduate Research. *Science*, 317: 42
- 2005 **Jadavji NM**, Kolb B, and Metz GA. Environmental enrichment modulates motor symptoms in a rat model of Parkinson's disease. *The Melorist*, p. 3.
- 2004 **Jadavji NM**, Kolb B, Diaz Heijtz R, Metz GA. Environmental enrichment modulates motor symptoms in a rat model of Parkinson's disease. *Society for Neuroscience: Neuroscience 2004 Press Book*.

## TEACHING AND SUPERVISION

### Midwestern University, Team Taught Courses

- Molecular Cell Biology (Fall 2019, n = 5 lectures)
- Molecular Cell Biology (Fall 2020, n = 7 lectures)
- Molecular Cell Biology (Fall 2021, n = 7 lectures)
- Molecular Cell Biology (Fall 2022, n = 8 lectures)
- Graduate Student Seminar (Fall 2019)
- Graduate Student Seminar (Fall 2020)
- Graduate Student Seminar (Fall 2021)
- Graduate Student Seminar (Spring 2022)
- Graduate Student Seminar (Winter 2022-2023)
- Neuroscience (Spring 2020, n = 5 lectures)
- Neuroscience (Spring 2021, n = 8 lectures)

Neuroscience (Spring 2022, n = 11 lectures)  
Journal Club (Summer 2021)  
Journal Club (Summer 2022) \*Course Director  
Research Methods (Fall 2021, n = 1 lecture)  
Research Methods (Fall 2022, n = 2 lectures)  
Advanced Topics I: Science Communication (Fall 2022) \*Course Director

Public Health and Nutrition Content (Summer 2021, n = 1 lecture)  
Application of Precision Medicine to Neurological Disease (Summer 2022, n = 4 lectures)

**Carleton University, Sole Instructor**

NEUR 1202 Introduction to the Neuroscience of Psychiatric Diseases  
The Human Microbiome and How It Affects Health, Learning in Retirement  
NEUR 4905 Honours Workshop, Department of Neuroscience  
What is the brain, how does it work and what goes wrong when it gets sick? Enrichment Programs  
How Nutrition Changes the Aging Brain, Learning in Retirement  
Ontario Online Research CO-OP  
Impact of Vitamins and Nutrients on Neurological Function, Learning in Retirement  
NEUR 4907 Honours Thesis, Department of Neuroscience  
How what we eat affects our brain, Enrichment Programs  
The Brain, Stress and Disease, Learning in Retirement  
Nutrients on Neurological Function, Learning in Retirement

**University of Ottawa, Sole Instructor**

Medical Research Grant Workshop, Centre for University Teaching

**Charité Medical University Berlin, Sole Instructor**

Homocysteine and Neurological Function

**McGill University, Laboratory Instructor**

Principles of Organismal Biology, Fall 2012  
Cell and Molecular Biology, Winter 2011 and 2012

**Teaching Assistant**

**McGill University and University of Lethbridge**

Neural Basis of Behaviour, Fall 2011  
Essential Biology, Fall 2009 and 2010  
Basic Genetics, Winter 2009  
Brain, Psychiatric and Neurological Diseases, Spring 2008  
Contemporary Problems in Brain and Behaviour and Cognitive Science, Fall/Spring 2008  
Child Development, Fall 2007  
Introduction in Biology, Spring 2007  
Research Methods in Neuroscience, Fall 2006

## Supervisory Experience

High school students, n = 11

Undergraduates, n = 27

### Graduate Students

2022 – present Mr. Siddarth Gunnala, Master of Biomedical Sciences

2020 - 2022 Mr. Jesse Jahual, B.Sc., Master of Biomedical Sciences

2019 - 2021 Ms. Gyllian Yahn, BSc., Master of Biomedical Sciences

2016 - 2019 Mrs. Annemarie Wolff, BSc., PhD Student

2015 - 2019 Ms. Usha Shanmugalingam, M.Sc., Doctoral student

2017 - 2018 Ms. Melissa Marquez, M.Sc.

2015 - 2018 Ms. Lauren Murray, M.Sc., Thesis: The impact of methylenetetrahydrofolate reductase (MTHFR) deficiency in a paraquat mouse model of Parkinson's disease

2015-17 Mr. Josh Emmerson, M.Sc., Thesis: Impact of a MTHFR-deficiency on focal ischemic damage to the sensorimotor cortex in aged mice \*Currently PhD student at McGill University

2015-16 Mr. Min Zhang, M.Sc. Master of Science Student, Thesis: Human rGDF-11 counteracts age-related short-term memory impairments in middle-aged mice

2015-16 Ms. Julia Grummisch, M.Sc., Thesis Tissue plasminogen activator promotes postnatal cortical neuron survival in vitro via JAK2-and mTOR-Dependent mechanisms

2014 Mr. Kevin Dam, M.Sc., Thesis: The effect of chronic hypoperfusion and folic acid deficiency in a murine model of methylenetetrahydrofolate reductase deficiency

2013 Ms. Abinaya Ravishankar, M.Sc., Thesis: Effects of folic acid deficiency induced hyperhomocysteinemia in a mouse model of chronic hypoperfusion.

2013 Mr. Ahmed Khalil, M.Sc., Thesis: The effect of chronic global cerebral hypoperfusion and folic acid deficiency on uracil DNA glycosylase knockout mice

\*Currently a PhD student at the Charité Medical University, Berlin, Germany

2013 Mr. Neemanja Milicevic, M.Sc., Thesis: Depletion of apoptosis repressor with caspase recruitment domain (ARC) decreases whole brain and cerebellar, but not hippocampal volume

\*Currently a PhD student at Academisch Medisch Centrum, Amsterdam, Netherlands

2015 Ms. Tiwa Lawal, B.Eng, M.Eng. \*Currently works at Johnson Control

2012 Ms. Renata Bahous, PhD \*Currently MD student at Sherbrooke University

### Postdoctorates

2016 Dr. Kathleen Van Benthem, PhD, Canadian National Postdoctoral Survey Report: An Emerging Shadow Workforce. Canadian Association of Postdoctoral Scholars-L'Association Canadienne de Stagiaires Post-doctoraux.

## Teaching Professional Development

2019 – present Teaching and Learning Seminar Series, Midwestern University

2015 – 2019 Teacher Training workshops, University of Ottawa



- 2015 Certificate in University Teaching, Education Development Center, Carleton University
- 2010 McGill University Learning to Teach Day workshop Attendance
- 2008 McGill University Tomlinson Project in University-Level Science Education (T-PULSE) workshop
- 2006 – 08 University of Lethbridge Centre for Advancement of Excellence in Teaching and Learning

## **SERVICE TO PROFESSION**

### **Academic service**

#### **Editorial Board**

Scientific Reports (2022 – present)

#### **Associate Editor**

Frontiers in Nutrition and Brain Health (2020 – present)

Bio-protocols (2019 – present)

#### **Review Editor**

Frontiers in Neuroenergetics, Nutrition and Brain Health (2018 – present)

Frontiers in Nutrition and Brain Health (2020 – present)

Metabolites (2020 – present)

Journal of Integrative Neuroscience (2020 – present)

#### **Journal Reviewer**

Neuroscience; Journal of Cerebral Blood Flow and Metabolism; Journal of Molecular Medicine; Neurotoxicity Research; International Journal of Pediatrics; Cellular and Molecular Neurobiology; Neural Regeneration Research; Science Reports; Journal of Advances in Biotechnology; Therapeutics and Clinical Risk Management; The Scientific Pages of Translational Neuroscience; Vessel Plus; Neuropsychiatric Disease and Treatment, Nutrition Research, Behavioral Brain Research, Nutritional Neuroscience; Neurological Disorders and Stroke; Brain Research Bulletin; Nutrients; PLoS One; Current Eye Research, Clinical Interventions in Aging; Toxicology Mechanisms and Methods; Naunyn-Schmiedeberg's Archives of Pharmacology, Bio-Protocols (protocols), Journal of Neuroscience, FASEB, Cancer Letters, The Open Journal of Biology, Science Magazine

#### **Preprint**

bioRxiv (affiliate member)

#### **Grant reviewer**

National Institutes of Health, Early Career Researcher Program: 2020

National Sciences Foundation: 2020, 2021, 2022, 2023

La Caixa Banking Foundation: Health Research Proposals: 2020, 2021

National Science Centre Poland: 2019

Graduate Women in Science Fellowship: 2019, 2020, 2021

Centre for Aging + Brain Health Innovation: 2017, 2018, 2019

### **Abstract Reviewer**

American Nutrition Society Annual Meetings: 2016, 2017, 2018, 2019, 2020, 2021  
University of Ottawa, Scinapse Undergraduate Science Case Competition: 2018, 2019, 2020, 2021

### **Board Memberships**

Graduate Women in Science

Vice-President, 2022 – present

American Society for Nutrition Early Career Nutrition Interest Group

Events Chair, 2022 – present

Reproducibility for Everyone (R4E)

Chair, Advisory Board, 2020 – present

Academic Parity

Advisory Board Member, 2020 - present

Journal of Young Investigators (JYI), Board of Director (BoD)

Board Member, 2011 - present

Chair, 2014 – 2021

Finance Chair, 2020 – present

Vice Chair 2013-14, 2022 – present

Canadian Society for Molecular Biosciences, 2017 - 2019

Board Member

Chair of Trainee Committee

Member of Canadian Association of Neuroscience Advocacy Committee

Canadian Association of Postdoctoral Scholars, 2015 - present

Vice President External, 2015-17

Chair of 2016 National Postdoctoral Survey, 2015 – 17

Community Leader, 2017 – present

Scientific Board, European Students' Conference, 2014-15

Board member

University of Lethbridge, Board member, 2007-08

Board of Directors

### **Science Outreach**

ASAPBio Fellow: 2021

Faculty Job Market Survey: 2018 - present

Skype a Scientist: 2019 – present

Letters to Pre-Scientist: 2019 – 2020

*eLife* ECRLife Taskforce: 2020

*eLife* Community Ambassador: 2019 - 2020

Canadian Society for Nutrition, Mentor: 2019, 2020, 2021

American Society for Nutrition Emerging Leaders Poster Session Judge: 2019

The New York Academy of Sciences, 1000 Girls, 1000 Futures: 2019, 2020

American Society for Nutrition, Blogger; Mentor; Member, Nutrient, and Gene Research Interest Group, 2018 - 2019

Society for Neuroscience: Brain Awareness Week Presenter: 2011, 2015, 2016, 2017

Let's Talk Science McGill University Chapter, Mentorship Coordinator, 2008-11

### **Committee work**

Admission Committee, Biomedical Sciences, Midwestern University: 2019 - present

Graduate Women in Science, Media Committee Member, 2018 – 2022, Fellowship Committee, 2018

Research Committee, College of Graduate Studies, Midwestern University: 2021 – 2022

Institutional Animal Care and Use Committee, Midwestern University: 2020 – 2021

Elsevier Advisory Panel, 2014 - 2019

Vivarium User Committee Member, Carleton University, 2017 - 2018

Graduate Student Buddy System Mentor University of Ottawa, 2016 – 2019

University of Ottawa Postdoctoral Association, Vice President External, Conference Organizing Committee, 2015-2017

Mendeley Advisor, 2015 - present

International Consortium of Research Staff Associations Outreach Committee Member, 2015-2016

Berlin Institute of Health Young Science Initiative, Member, 2014- 2015

NeurOnLine, Society of Neuroscience, Champion of Behavioural Neuroscience, 2011–2015

Montreal Children’s Hospital Research Institute, Student Seminar Coordinator, 2010-2012

McGill University Human Genetics Student Society, Vice-President Communications, 2009-11; Chair of Human Genetics Organizing Committee (2010)

McGill University Post Graduate Student Society, Council Graduate Student Support, Committee Member, 2008-2011

University of Lethbridge, Graduate Students’ Association President, Board of Governors Member, 2007- 2008

### **Community service**

Volunteer, LiveWorkPlay! Ottawa, 2015 - 2019

### **Service Awards**

Let’s Talk Science Volunteer of the Month Award, 2008

Journal of Young Investigators Staff Member of the Month, 2008

### **Media Coverage of Research**

- 2022      Field Knowledge, Journal of Young Investigators  
<https://www.youtube.com/watch?v=t7Xr3ra4WZ8>
- 2020      Getting your professorship.  
<https://www.thenakedscientists.com/articles/interviews/getting-your-professorship?fbclid=IwAR2BiN5brm-zDJdDBX6hLsGYRm6nxC782fkf0ZpkPYWqRSub8I1DF-0vKk>
- 2020      Powell K. Daunting but doable: job searching after a postdoc.  
[https://www.sciencemag.org/features/2020/08/daunting-doable-job-searching-after-postdoc?fbclid=IwAR2kb3SIRyQML-n6OHcxJ8DeUF3buWQthAo8zMUx\\_IIVHEIq-qI2xU0psoA](https://www.sciencemag.org/features/2020/08/daunting-doable-job-searching-after-postdoc?fbclid=IwAR2kb3SIRyQML-n6OHcxJ8DeUF3buWQthAo8zMUx_IIVHEIq-qI2xU0psoA)
- 2020      Notman N and Woolston. Fifteen to one: how many applications it can take to land a single academic job offer. [https://www.nature.com/articles/d41586-020-02224-5?fbclid=IwAR0v93PIuW\\_cOjZuV4TN9Y81Y19rZDpLrATTToKejRH7ijMpvxFY0bHfzdyM](https://www.nature.com/articles/d41586-020-02224-5?fbclid=IwAR0v93PIuW_cOjZuV4TN9Y81Y19rZDpLrATTToKejRH7ijMpvxFY0bHfzdyM)

- 2020 Smith, C The important of informational interviews. [https://www.insidehighered.com/advice/2020/06/01/given-uncertainty-about-faculty-hiring-fall-job-seekers-should-actively-look?fbclid=IwAR2wuRPjqTTXzU3oUn95L\\_V5TNhBSAj6ORq3iEXoVW8aUDlm4tUVOh-5Flc](https://www.insidehighered.com/advice/2020/06/01/given-uncertainty-about-faculty-hiring-fall-job-seekers-should-actively-look?fbclid=IwAR2wuRPjqTTXzU3oUn95L_V5TNhBSAj6ORq3iEXoVW8aUDlm4tUVOh-5Flc)
- 2019 Miller, PC Research offers tips on job hunting in academia. <http://blogs.und.edu/und-today/2019/10/job-hunting-in-academia/>
- 2019 Reiner, D. The path to professorship by the numbers of why mentorship matters <https://socialsciences.nature.com/users/325112-diego-a-reiner/posts/55118-the-path-to-professorship-by-the-numbers-and-why-mentorship-matters>
- 2019 Conroy, G. How to land a faculty job. <https://www.natureindex.com/news-blog/how-to-land-a-faculty-job>
- 2019 Coates J, Dey G, Davla S, Kitaoka M. Shining a spotlight into the black box of the academic job market. <https://prelights.biologists.com/highlights/insights-from-a-survey-based-analysis-of-the-academic-job-market/>
- 2017 Abdelwahab A. Eating your green may be good for your brain. Metro News Ottawa. <http://www.metronews.ca/news/ottawa/2017/08/13/eating-your-greens-may-be-good-for-your-brain.html>
- 2017 Menayang A. Choline and vitamin B supplementation may improve post-stroke brain function. <https://www.nutraingredients-usa.com/Article/2017/07/31/Choline-vitamin-B-supplementation-may-aid-post-stroke-brain-function>

### **Professional Organization Memberships**

Midwestern University Alzheimer's Advisory Committee  
 Arizona Physiological Society  
 Full Member, Sigma XI (invited)  
 American Heart Association  
 American Society for Nutrition  
 Canadian Association for Neuroscience  
 Canadian Nutrition Society  
 Graduate Women in Science  
 Organization for the Study of Sex Differences  
 Society for Neuroscience  
 World Stroke Organization