

Curriculum Vitae

Martin Bardhi

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University Education

University of Toronto, MD/PhD | August 2025 – Present

PhD Program not yet decided

University of Calgary, Bachelor of Science | September 2021 – June 2025

Program: Major in Neuroscience (Honours), Minor in Chemistry

Research Experience

Honours Thesis | September 2024 – June 2025

Supervisor: Dr. Adam Kirton

Project: Lesion Symptom Mapping of Motor Outcomes Following Perinatal Stroke

- Analyzed the relationship between stroke location and motor outcome impairments in children with perinatal stroke to better guide prognostication and potential therapeutics

Summer Student Research | May 2024 – August 2024

Supervisors: Dr. Keith Sharkey and Dr. Minh Dang Nguyen

Project: Treating Amyotrophic Lateral Sclerosis (ALS) from the Gut

- Maintained, treated, and collected tissue from transgenic mice and analyzed spinal cord to better understand the role of the gut-brain-axis in neurodegenerative disease

Introduction to Research in Chemistry, lab-based course | January 2024 – August 2024

Supervisor: Dr. Farideh Jalilehvand

Project Title: Synthesis of a $\text{Re}(\text{CO})_3$ complex with a glycoconjugated ligand as a potential antitumor active compound

Contribution:

- Conducted literature review to outline potential benefits of rhenium-based antitumor compounds, one of which was synthesized, purified and characterized
- Methodology included: size exclusion chromatography, ESI-MS, UV-VIS and NMR spectroscopy and elemental analysis

Summer Student Research | May - July 2023, May - August 2022

Supervisor: Dr. Adam Kirton

Project: tDCS electrode placement optimization for children with perinatal stroke

- Modeled electrode placement for transcranial direct current stimulation in children with perinatal stroke, with the hope of optimizing future therapeutic applications
- Also assisted with a clinical trial being run in the lab, leading children in daily ‘summer camp’ activities, delivering tDCS therapy, and assisting with MRI scans

Publications:

Maiani M, Lahey N, **Bardhi M**, Floer Garrido J, Hilderley A, Carlson HL, Kirton A. Visuo-perceptual Abilities in Children With Perinatal Arterial Ischemic Stroke and Associated White Matter Microstructure. Journal of Child Neurology. 2025;0(0). doi:10.1177/08830738251394438

Bardhi M, Zewdie ET, Kirton A, Carlson HL. Optimization Simulations of Transcranial Direct Current Stimulation Montages in Children With Perinatal Stroke. Neuromodulation. 2025 Jun 9:S1094-7159(25)00187-4. doi: 10.1016/j.neurom.2025.05.002. Epub ahead of print. PMID: 40492999.

Beraldi EJ, Lee S, Jiang Y, Rea IM, Phull R, Keenan CM, Stephens M, **Bardhi M**, Bankole O, Pfeffer G, Biernaskie J, McCoy KD, Elinav E, Sharkey KA, Nguyen MD. (2024). The gut microbiota is a determinant of sexual dimorphism in ALS-linked TDP43 mice. bioRxiv:2024.08.29.610355. (preprint – not yet peer reviewed)*

Honours, Scholarships and Awards During University

Honours Enrolment and Dean’s List Standing (University of Calgary) | 2021 - 2025

Snyder Institute for Chronic Disease Best Oral Presentation Award | August 2024

Branch Out Neurological Foundation Undergraduate Grant | March 2024

Alberta Innovates Summer Research Studentship | March 2024 (Declined*)

HackPrinceton Sustainability Track Award | April 2023

- Awarded for project that best supports health and vitality of humans and the environment

Alberta Innovates Summer Research Studentship | March 2023

Louise McKinney Post-secondary Scholarship (University of Calgary) | September 2023

Jason Lang Scholarship (University of Calgary) | September 2022

Alumni Association Jean Owen Scholarship (University of Calgary) | September 2021

Presidents Admission Scholarship (University of Calgary) | September 2021

Extracurricular Activities:

Neuroscience Students Association (President) | September 2021 – June 2025

- Led a student club that provides a platform for peer connection and professional development to foster student success
- As president, I oversaw all details from finances to advertisement and event management

Run for Little Ones (Co-President) | April 2022 – June 2025

- Led a student club that fundraises for the Alberta Children's Hospital Foundation
- Fundraisers include our staple annual run, as well as bake sales, bottle drives and raffles

Mathison Centre Outreach Committee | September 2023 – June 2025

- Local organization focused on improving mental health literacy and awareness
- On the committee, I would suggest and aid in planning and running events that were open to all citizens, where experts were invited to speak on mental health related issues

Audio/Visual Tech Team Director, Bonavista Church | July 2020 – August 2025

- Leading the tech team to ensure that weekly services are captured with high quality and streamed online using production quality A/V equipment and software

Youth Group Leader, Bonavista Church | September 2023 – April 2025

- Fostered a supportive and comfortable environment where children (aged 12-14 years old) could come and discuss religious concepts, share personal struggles
- Focused on developing character, critical thinking, and knowledge through discussion

Lego-Robotics Coach, Westmount Charter School | September 2023 – April 2025

Regional Manager, EDU Beyond | July 2020 – February 2022

Employment

Laboratory Technician, Westmount Charter School | September 2024 – July 2025

Coding Instructor, Juniotech Kids Academy | July 2019 – September 2024

Lifeguard and swim instructor, MNP Sports Centre | November 2021 – May 2022

Swim instructor (seasonal), McKenzie Lake Resident Association | August 2021