

Dion Kelly

PhD Candidate, Neuroscience
Calgary Pediatric Stroke Program (Alberta Children's
Hospital)
University of Calgary
MBT Class of 2018



After completing her Bachelor of Medical Sciences degree from the University of Western Ontario, Dion aspired to achieve a successful career as a multi-disciplinary professional in the corporate world of medical technology. With a desire to combine her undergraduate degree in medical science with business, there was no better graduate program than the Master of Biomedical Technology.

Through the Project in Biomedical Technology course, Dion was able to explore her interests in neuroscience and neurotechnology. For her project, Dion focused on a virtual reality program for brain-computer interfaces (BCIs) to facilitate neurorehabilitation in Parkinson's Disease. This led her to pursue a practicum placement in neuroscience research using emerging neurotechnologies at the Hotchkiss Brain Institute (HBI). She completed an innovative research project using a mouse model to study how exercise, motivated by virtual reality, could improve outcomes in Parkinson's patients and won Best Oral Presentation at the HBI Summer Student Symposium.

Dion is currently a PhD candidate in Neuroscience at the University of Calgary, where she is one of a few people worldwide doing clinical research on BCIs for children. Her thesis is focused on establishing and optimizing BCI performance for children with severe neurological disabilities. She is also actively engaged in multiple studies using advanced neurotechnologies, including non-invasive brain stimulation and emerging neuroimaging techniques. Thanks to her MBT background, Dion is the "business consultant" for her lab, which is highly interested in opportunities for technology commercialization. Throughout MBT and in her PhD Dion has also played a primary role in the Innovation4Health and NeuroNexus Health Hack Competitions as the Co-Director of Operations.

For Dion, the MBT program played a major part in advancing her career goals. She has utilized many of the skills gained in MBT in subsequent endeavors, including the Innovation4Health competition and in her PhD. For future students, Dion advises: "The MBT program is an amazing opportunity to build on your leadership abilities, your critical thinking skills, and expand your intellectual curiosity. There aren't many interdisciplinary programs like this one that teach you a diverse range of skills, so take advantage of every opportunity to utilize these skills. And always be networking!"