

**Tim Horton**

Postdoctoral Associate

## Field of Study

*Radiation Oncology***What impact do you want your research to have?**

I want my research to ultimately contribute to developing a new drug, whether that means some of the initial discovery or further along the pipeline toward translation.

**What inspired you to pursue your area of research?**

The landscape of treatments that are effective for glioblastoma is unfortunately very bleak. In my graduate research, I worked as a chemist/chemical biologist on a translational project in beta cell biology for which the application was a potentially new therapeutic for diabetes. That was fun and rewarding, but the fact that diabetes can be managed made the prospect of getting a new therapeutic to the finish line pretty daunting. Working now in glioblastoma, I'm more confident that I'll be able to see successes in the lab translated into real clinical trials.

**What is most exciting about your research?**

The most exciting aspect of my research is that it spans across multiple disciplines, from the analytical chemistry I'm used to using, all the way to mouse surgeries and clinical samples. My postdoctoral mentor, Scott Welford, has done an excellent job of guiding me to come up with my own ideas for how to tackle the problem we're studying.

**What makes your research unique?**

I'm studying the polyamines, which are small molecules that are extremely prevalent in many different cancer types, but nobody has figured out exactly what they do. I'm using a genetic approach paired with analytical chemistry and molecular biology to really understand the nitty-gritty aspect of polyamines in tumors. My training as a chemist in a translational project outside of cancer makes me an outsider in the world of cancer biology, and I think that will help me provide a fresh and valuable perspective as my project matures.

**What are your plans after finishing your postdoc at the University?**

My career goal is to establish my own research lab and work on developing new highly selective small molecule approaches to work on improving treatments for diseases. I love teaching, both in the classroom setting as well as in a more personal mentoring setting. I hope to focus especially on widespread diseases so that people I know and love can potentially benefit from my work.

