

It is critical for young scientists such as myself to change institutions and be exposed to and learn from a variety of scientific thought. Receiving this Banting Fellowship will allow me to join Dr. Warren's world-class laboratory to learn the techniques for cryogenic electron microscopy, and more critically gain a structure-function oriented perspective to understand the molecular world. This contrasts the molecular genetics and computational foundation of my scientific career to date.

### **Career Delay**

I defended my doctoral degree in August 2019, yet I remained at the University of British Columbia through April 2020. My wife was five months pregnant at my defence and we decided to remain in Vancouver, BC, for the birth. I had secured the project grant for my ongoing rRNA variation research at UBC, which I could budget to pay my salary during this transition period. I had allocated this time to write, submit and complete the reviews for my manuscript, "Loss of macpΨ ribosomal RNA modification is a major feature of cancer" in *Cell Reports*, published in May 2020.

Originally we had planned that I take unpaid parental leave from May 2020 – August 2020 to allow my wife to complete an ongoing research project for her post-doctoral fellowship. The COVID-19 pandemic caused an unexpected delay to these plans. Working from home, I initiated the *Serratus* project ([www.serratus.io](http://www.serratus.io)) to help fight the global pandemic. I was able to assemble a team of leading scientists from Vancouver, San Francisco, Atlanta, Heidelberg, Paris, and St. Petersburg. Together, we developed a computational architecture which I believe will revolutionize the field of computational biology. So while I was officially *unaffiliated* during this period, I was actively leading a major research project and pushing the boundaries of what is possible in bioinformatics.

So while this post-doctoral period (Sept-2019 – current) is not a conventional 'post-doc', it has been the most scientifically and personally rewarding period of my career. Without the obligations or institutional constraint of a standard position, I realized my potential as an independent scientist.

### **Career Trajectory**

With the first and now second wave of COVID-19 subsiding, we decided January 2021 is the earliest reasonable opportunity for us to immigrate to the United Kingdom. I am incredibly excited to be joining Dr. Warren at the University of Cambridge, who is my first choice for a post-doctoral mentor.

I am sufficiently proficient in computation and molecular genetics that I could lead a research group based on these disciplines, but I lack such experience in structural biochemistry. The quality of Dr. Warren's published works specifically on ribosome structure-function is exceptional, and is the ideal complement to address my short-comings as a scientist. Cambridge is a leading university, which provides ample opportunities to network and establish collaborations which will be instrumental in establishing my own research group upon returning to Canada.

Receiving this Banting Fellowship will ensure I have two years for steady, focused research in Cambridge. I will take full advantage of this opportunity to learn and become a better scientist. Ultimately this will improve my capacity to lead a competitive research group at a Canadian university which in turn will contribute to advancing research excellence Canada.