Graduate student profile:

Wilfred de Vega
Cell & Systems Biology, McGowan Lab.

Previous degree:
B.Sc., Cell & Molecular Biology Co-op Specialist, UTSC.

Tell us about your research at UTSC:
My research focuses on how the environment can influence downstream immune response through epigenetics. I mainly explore this particular question in the context of Chronic Fatigue Syndrome (CFS), a debilitating disease with an unknown cause that is characterized by a fatigue that fails to resolve after sufficient rest. Epigenetic changes may play a role in CFS, but epigenomic differences in CFS have yet to be characterized. To investigate this, I examine the epigenome and stress response of immune cells from CFS patients. Through this research, I hope to contribute to our understanding of how environmental factors can affect the epigenome and to determine potential biomarkers for accurate CFS diagnosis.

Tell us about why you chose your graduate program or lab:
I chose Dr. Patrick McGowan’s lab because of his main research theme: the epigenetic impact of early life stress on future stress response. Dr. McGowan previously published a highly cited study in Nature Neuroscience which found DNA methylation differences in the glucocorticoid receptor, a major player of our body’s stress response axis, associated with childhood abuse in suicide completers. Since there is still a lot to learn about epigenetics and I am interested in exploring systems biology, I wanted to pursue my graduate studies with an advisor that was at the forefront of the field with an emphasis in systems-level analysis.

Tell us about any fellowships you hold / have held in grad school:
Year 1: U of T – Department of Cell & Systems Biology – Graduate Admissions Award
Year 2: NSERC Canadian Graduate Scholarship – Master’s; University of Toronto Department of Cell & Systems Biology – Vietnamese-Canadian Community Graduate Research Award
Year 3: University of Toronto - The Queen Elizabeth II Graduate Scholarships in Science and Technology Sherwin S. Desser Award
Years 4 and 5: NSERC Canadian Graduate Scholarship – Doctoral

What are your future career goals and how has your graduate work set you up to achieve those goals?
My goal is to continue in health research with a focus on epigenetics. My graduate work allows me to learn the latest regarding my field through collaborations and conferences, improves my research communication skills, and strengthens my network with students and experts in the biological sciences.

In my free time I like …to dine at various restaurants around Toronto and practice my photography.

Do you have any advice for prospective students?
If you have a passion for research and love to learn something new every day, then I highly recommend applying for grad school. You will always learn something new while significantly contributing to science. Make sure you select a lab whose research closely aligns to your scientific interests and to talk to other grad students before making your decision. It is also important to never forget about yourself! Make sure you engage in extracurricular activities and have hobbies outside of the lab in order to break some of the monotony of grad school.