The Laboratory for
RNA-Based Lifeforms

Computational Biologist - Virology (Postdoc or equal)

Join "**The Laboratory for RNA-Based Lifeforms**" in University of Toronto's Donnelly Centre. Together with **Dr. Artem Babaian** the work will develop the state of the art for the detection and sequence analysis of RNA viruses and virus-like agents.

Building upon the *Serratus* project (www.serratus.io) we will explore the far limits of Earth's Virome. Briefly, we developed an open-souce AWS-cloud backed computing architecture to analyze 5.7 million sequencing datasets (10.2 petabases) and discover >130,000 novel RNA viruses (only 15,000 were known previously)… in only 11 days. Learn more in our first *Nature* paper, or watch our ISMB22 talk, "*Serratus: Hacking Earth's Virome*".

We have a very collaborative and fast-paced research environment with international laboratories. Our work aims to also create free and open data resources to catalyze the field of virology globally.

Who you are

Computational virology is undergoing a renaissance. We're looking to support passionate, self-motivated scientists with a clear vision to take on high risk research ideas and move the field forward. In your application provide evidence for initiation and follow-through of scientific ideas. We're open to applicants with expertise in the areas of computational biology.

Programming experience is required, although inversely weighted with biological experience. Advanced algorithm-level coding experience is not necessary, but you must be willing to learn/teach and converse with computer-science oriented scientists. Collaboration with and mentoring of junior scientists is expected.

(cont'd)

Qualifications

Minimum (*provide evidence please*)

- PhD in virology, ecology, epidemiology, genetics, biochemistry, molecular biology or computer science
- Fluency (show example code) in >=1 programming language, such as R or Python
- Highly motivated to learn, teach and pursue science across disciplines
- Excellent written and verbal communication skills

Preferred qualifications

- Innovative in computational virology, genomics, phylogenetics, ecoinformatics, RNA structure-function, and/or clinical/veterinary virology
- Experience with “big data” and cloud-computing infrastructures
- Demonstration of scientific mentorship, organizational and/or leadership skills

Where we are

The Donnelly Centre is located in the downtown (St. George) University of Toronto campus in Canada. We are embedded amongst several world-class computational biology groups and the Donnelly offers a cross-disciplinary repertoire of biological laboratories for validation/collaboration. The University of Toronto is the top Canadian university, and offers countless opportunities for extending your academic experiences.

The start date is immediate/flexible, and we encourage applicants from diverse backgrounds. The position can be full-time or contracted consultant, an ideal contact will be Toronto-local or willing to relocate, but remote work is possible for an exceptional applicant.

We will be recruiting until this vacancy is filled.

Email your package to artem@rRNA.ca with subject **Application id0001 - comp viro**