SIMON FRASER UNIVERSITY - JOB OPPORTUNITY – AUGUST 11TH, 2020

Immune Repertoire Data Curator and Bioinformatics Technician

An exciting opportunity to work with state-of-the-art, big-data research in immunogenetics is currently available with the iReceptor team at Simon Fraser University (www.ireceptor.org). The ideal candidate combines an understanding of immunology with experience and training in bioinformatics, such as command line programming and familiarity with basic bioinformatic programs. The COVID-19 pandemic affects two aspects of this job. First, the successful candidate will be contributing to our COVID-19 specific data repository, which we believe will directly contribute to development of therapeutics and vaccines against this virus. Second, it is possible to consider candidates who reside in Canada but who would work virtually with the Simon Fraser team, especially if they have experience and connection with a Canadian immunogenetics research lab where they reside.

The job entails two main aspects. One is data curation: (i) performing literature searches and reading scientific literature on the sequencing of B-cell/antibody- and T-cell-receptor repertoires, (ii) documenting metadata characterizing the acquisition and processing of samples for each study, (iii) stating the research goals of each paper, (iv) running bioinformatics annotation tools to process publicly available sequence datasets from these papers, and (v) curating the annotated data in an iReceptor database of immune receptor repertoires. The second main aspect is basic bioinformatic manipulation of data produced by the 10X Genomics Immune Profiling system: https://www.10xgenomics.com/solutions/vdj/. This work will be in close collaboration with Dr. Mark Brockman's lab in SFU's Faculty of Health Sciences and the Department of Molecular Biology and Biochemistry, https://www.sfu.ca/fhs/about/people/profiles/mark-brockman.html, focused on the discovery of a therapeutic vaccine for a cure for HIV. The iReceptor team will help the data curator to learn what is needed to complete these tasks.

This is a great opportunity to expand basic bioinformatic skills and to work with state-of-the-art bioinformatics as applied to immunogenetics. This field is rapidly expanding with applications in cancer immunotherapy and treatment of autoimmune and infectious diseases.

Minimal requirements:
- Skill in reading and understanding the biomedical literature
- Course work in and a broad knowledge of molecular biology and immunology
- Basic computational proficiency and experience with command-line tools

Preferred:
- BSc in biology, molecular biology, immunology, life sciences or computer science
- Experience with bioinformatics tools
- Experience in working with biological data
- Experience working with large data sets
- Experience with writing simple programs to manage and process data

Salary and tenure:
$25.00 CDN per hour minimum depending on experience; ideal start date of August 31st, minimum of 6 months with a term of 12 months highly preferred. It is possible that extensions to this term will be available depending on budget and performance.

Send resume and short description of how your experience could contribute to this effort to:

Pam Borghardt,
iReceptor Managing Director
pjborgha@sfu.ca
Simon Fraser University, Burnaby, BC