

# Bioinformatics Analyst -Genome Sciences and Technologies

## Job Description:

The Computational Immunology Research Group is seeking a Bioinformatics Analyst to address a range of computationally complex problems at the immune-disease interface. This encompasses a broad spectrum of diseases, including cancer immunology and immunotherapy, vaccine design for both cancer and emerging diseases, and future studies in autoimmunity.

Our work aims at developing novel immunotherapies and vaccines, leveraging advanced genomics and transcriptomics pipelines. The team, comprising diverse professionals like biologists, statisticians, software engineers, and data scientists, collaborates internationally to create new therapies.

The role offers extensive training in data science and high-performance computing, with access to top supercomputers. We provide a competitive international salary and opportunities for professional growth. Join us in tackling some of the most challenging problems in immunotherapy and disease research.

## How to apply:

You are encouraged to contact  
Dr. Javier Alfaro  
Javier.Alfaro@proteogenomics.ca before submitting  
an application.

## Responsibilities:

A post for a Computational Biologist in immunology is currently available in the international research

group led by Dr. Javier Alfaro. You will be (or become) an expert in a diversity of genomics and transcriptomics analysis pipelines including single cell analysis, bulk tumour analysis and blood biopsy analysis. You will support and develop grant applications within the team and provide guidance to enable best practice for experimental design. Within the bioinformatics group, you will work within a cohesive interdisciplinary team of data scientists that are located internationally in a variety of sites including Canada, UK, Poland and India. You will enable programs and pipelines for analysis, establish approaches for the integration of the analysis with multiple genome-wide '-omics datasets including DNA and RNA sequencing and turn these into robust analytical pipelines that will be used to explore questions in cancer vaccine science.

## Responsibilities may also include:

- Provide consulting on biological data analysis for researchers conducting cutting-edge molecular biology research
- Advise and help researchers with their experimental design, data analysis and interpretation of results
- Provide training (2-5 days courses) in the area of machine learning and data science in biology
- Mentorship of junior staff and co-op students
- Collaborate and interact with other scientists at throughout our international networks and partner networks in an international, interdisciplinary, and highly collaborative work environment

## Preferred Qualifications:

- Bachelor's degree (MSc preferred) or further training in Machine Learning or Bioinformatics
- Experience with version control systems (SVN, Git, Mercurial, etc)
- Experience with some of the following: R, Python, C, C++, Java
- Knowledge of UNIX/Linux environments

## Beneficial skills include:

- Experience in analyzing single cell 'omics, imaging, -omics, proteomics, or microfluidics data sets
- Experience in teaching
- Experience in R as a package developer or maintainer
- Knowledge of Python or other scripting languages
- Knowledge of scientific authoring frameworks (LaTeX, Rmarkdown) and RShiny
- Experience with version control, method benchmarking, or data management technologies
- experience with Amazon Web Services, Google Cloud Engine or other clouds

## Benefits

The international Computational Immunology Research Group welcomes individuals through various collaborations. Each path offers unique benefits, tailored to the path of entry. We encourage potential candidates to contact Dr. Javier Alfaro (Javier. Alfaro@proteogenomics.ca) for an initial discussion about the opportunities available. This network is a dynamic environment for skill development in machine learning and high-performance computing, with remote work compatibility. It's an ideal setting for those keen on contributing to significant challenges in immunology and disease research across a spectrum of areas.