# Post Doctoral Fellowship, Medical Genomics/Bioinformatics, Departments of Biochemistry & Molecular Biology and Medical Genetics

**Job ID:** 15145
**Location:** Foothills Campus
**Area:** Medical Genomics/Bioinformatics
**Duration:** One year with possibility of extension
**Start date:** Immediate and no later than September 1, 2018
**Annual Stipend:** Commensurate with experience: $45,000 minimum, plus Plan C Extended Benefits
**Funding Type:** Grant Funded

The **Departments of Biochemistry & Molecular Biology and Medical Genetics** in the **Cumming School of Medicine** at the University of Calgary are accepting applications for a Postdoctoral Fellow in **Medical Genomics.**

**Job Description:**
Silent Genomes is a Genome Canada/CIHR recently funded Large-Scale Applied Research Project focused on reducing health care disparities and improving diagnostic success for children with genetic diseases from Indigenous populations. Precision diagnosis, a sub-activity of the Silent Genomes, has the main goal to bring state-of-the-art whole genome sequencing approaches to at least 200 Indigenous families across Canada affected by a suspected genetic disease. The precision diagnosis sub-activity is organized in two levels: (Level 1) application of tried and established semi-automated bioinformatics approaches to analyze whole genome sequencing data, and (Level 2) testing and development of new bioinformatics approaches to reach beyond current state-of-the-field, and to facilitate identification of genetic causes in patients who remain undiagnosed after Level 1 analysis. The two teams collaborate very closely.

Here, we are seeking a highly motivated post-doctoral research fellow with a strong background in genomics/bioinformatics/computational biology/human molecular genetics to help innovate current whole genome sequencing approaches to increase the diagnostic potential of this test for the Silent Genomes effort.

This full-time position offers the candidate a unique opportunity to be exposed to the multidisciplinary Silent Genomes team (cross-country team of clinicians and genetic counsellors, local bioinformaticians and scientists), as well as multidisciplinary approaches (human and model organism genomics; 'wet' and 'dry' lab approaches in the group of the Activity 2 co-lead) and to contribute innovative research with a substantial direct translational potential (e.g. better diagnostics). ***Importantly, applicants who either self-identify as Indigenous and/or are interested in Indigenous health are particularly encouraged to apply for this position.***

**Work Performed:**
- Assessing existing and developing innovative approaches to accurate detection of 'all' types of genetic variations in an individual genome
- Keeping up-to-date with scientific advances (e.g. relevant literature review, scientific meetings, twitter)
- Designing projects and experiments
- Compiling, analyzing and integrating diverse sets of data (e.g. phenomics, genomics, transcriptomics)
- Working in close collaboration with Activity 1 team to ensure that all research steps fully comply with Indigenous-led governance and Indigenous Cultural Safety

- Working in close collaboration with Activity 2, Level 1 team to identify current gaps
- Working in close collaboration with the Activity 3 team to assess emerging new resources
- Working in close collaboration with the Activity 4 team to allow efficient assessment of economics of precision diagnosis for Indigenous children
- Reporting to the Activity 2 co-lead and the team on the progress during regular individual and lab meetings
- Willingness to travel up to four times/year within Canada for meetings with the rest of the Silent Genome team
- Communicating results: conference presentations, manuscripts, reviews, www, collaborators nationally and internationally
- Working collaboratively with team members to provide summary reports of research progress and milestones
- Providing supervision and mentorship to bioinformatics trainee(s)

**Qualifications:**
- PhD degree in Genome Sciences, Medical Genetics/Genomics, Computer Science, Bioinformatics or related disciplines
- Extensive knowledge of genomics and genetics
- Extensive knowledge of Unix, Linux, R, Python and/or related programming languages (e.g. Perl)
- Experience with Cluster Computing
- Proven ability to work in a confidential environment
- Successful completion of an Indigenous Cultural Safety Course (may be completed upon hiring).
- Research experience in Indigenous health and research will be considered an asset
- The candidate is expected to show:
  - Keen interest in Indigenous health and research
  - Drive and enthusiasm to both lead and work as a member of a team
  - Creativity, initiative and good judgment for multi-tasking in a deadline oriented environment
  - Effective oral and written communication, analytical, and interpersonal skills
  - Excellent organizational skills and ability to learn new skills quickly
  - Enthusiasm for highly interdisciplinary research and dedication to explore emerging techniques
  - Accuracy and attention to detail

**Application details:**
Interested applicants should submit a cover letter with research interests, brief statement on their future goals, and fit with the group's research focus, curriculum vitae, and the names of three referees willing to provide letters of reference to Maja Tarailo-Graovac at [maja.tarailograovac@ucalgary.ca](mailto:maja.tarailograovac@ucalgary.ca). Only shortlisted candidates will be contacted. The position will be open until a suitable candidate is identified.

***The traditional Blackfoot name of the City of Calgary is "Mohkinstsis". We would like to acknowledge the traditional territories of the Blackfoot and the people of the Treaty 7 region in Southern Alberta, which includes the Siksika, the Piikuni, the Kainai, the Tsuu T'ina, and the Stoney Nakoda First Nations. The City of Calgary is also home to Métis Nation of Alberta, Region III.***

*All qualified candidates are encouraged to apply; however, we encourage those who self-identify as Indigenous to apply, and strong preference will be given to those who identify as Indigenous and have the required combination of education and experience.*

**Additional Information**

To learn more about postdoctoral scholar opportunities at the University of Calgary and all we have to offer, view our **Postdoc Careers website**. For more information about the Cumming School of Medicine visit **Careers in the Cumming School of Medicine**.

**About the University of Calgary**

The University of Calgary is Canada's leading next-generation university – a living, growing and youthful institution that embraces change and opportunity with a can-do attitude. Located in the nation's most enterprising city, the university is making tremendous progress on its Eyes High journey to be recognized as one of Canada's top five research universities, grounded in innovative learning and teaching and fully integrated with the community it both serves and leads. The University of Calgary inspires and supports discovery, creativity and innovation across all disciplines. For more information, visit **ucalgary.ca**.

To succeed as one of Canada's top universities, where new ideas are created, tested and applied through first-class teaching and research, the University of Calgary needs more of the best minds in our classrooms and labs. We're increasing our scholarly capacity by investing in people who want to change the world, bringing the best and brightest to Calgary to form a global intellectual hub and achieve advances that matter to everyone.

**About Calgary, Alberta**

Calgary is one of the world's cleanest cities and has been named one of the world's most livable cities for years. Calgary is a city of leaders – in business, community, philanthropy and volunteerism. Calgarians benefit from the strongest economy in the nation and enjoy more days of sunshine per year than any other major Canadian city. Calgary is less than an hour's drive from the Rocky Mountains and boasts the most extensive urban pathway and bikeway network in North America.

*The University of Calgary recognizes that a diverse staff/faculty benefits and enriches the work, learning and research experiences of the entire campus and greater community. We are committed to removing barriers that have been historically encountered by some people in our society. We strive to recruit individuals who will further enhance our diversity and will support their professional success while they are here. We encourage all qualified applicants to apply, however preference will be given to Canadian citizens and permanent residents of Canada.*