

University of Alberta

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Research Associate

SCI Biological Sciences

Competition No. - **A106131577**

Closing Date - **Jan 20, 2017**

The Research Associate, reporting to the Principal Investigator (PI), will develop the experiments in conjunction with the PI, assist with the preparation of papers, presentations and publications based on the outcomes of the research and provide supervision of students and Research Assistants.

Specific responsibilities include but are not limited to:

- Performs biostatistics and bioinformatics functions related to health and metabolomics research
- Provides statistical consultation and analysis to support metabolomic data research including quantitative and qualitative analysis, predictive model development, and finding significant biomarkers
- Develops advanced and robust algorithms for metabolomic data analysis and biomarker analysis
- Implements custom programs for metabolomic data analysis using R statistical software
- Develops automation algorithms and a web-based application for automatic profiling of GC-MS spectrum
- Develops a plant metabolomic database (called PhytoBank) and its web-based application
- Develops machine learning models using Weka
- Contributes to writing manuscripts for publication
- Manages and updates the chemical shifts prediction application from a protein structure (called SHIFTX2)
- Manages the application servers including SHIFTX, RefDB, ShiftCor, etc.
- Analyzes data using programs such as Metaboanalyst, Metabominer, MSEA, METPA, etc.
- Provides general support for TMIC/Lab members that includes pre-processing experimental data for metabolomic data analysis and reporting
- Develops and modifies lab-developed programs with C/C++, Java, Perl, Python, Shell, SQL, and statistics data analysis package (R, SAS, SPSS) on Linux OS environment
- Manages and monitors the TMIC's workspace back-up system
- Collaborates with others performing related research (e.g. Alzheimer's disease neuroimaging initiative (ANDI) in Bioinformatics Networks)

Knowledge, Skills, and Abilities:

- PhD in Bioinformatics, Statistics, or Computer Science
- Experience using database management systems such as MySQL, Oracle, etc.
- Excellent analytical and organizational skills

In accordance with the Trust/Research Academic Staff Agreement, this position is for a term of one year, with the possibility of renewal, and offers a comprehensive benefits package found at: www.hrs.ualberta.ca and annual salary range of \$57,350 to \$64,522.

How to Apply

Apply Online

Note: Online applications are accepted until midnight Mountain Standard Time of the closing date.

All qualified candidates are encouraged to apply; however, Canadians and permanent residents will be given priority. If suitable Canadian citizens or permanent residents cannot be found, other individuals will be considered.

The University of Alberta is committed to an equitable, diverse, and inclusive workforce. We welcome applications from all qualified persons. We encourage women; First Nations, Métis and Inuit persons; members of visible minority groups; persons with disabilities; persons of any sexual orientation or gender identity and expression; and all those who may contribute to the further diversification of ideas and the University to apply.