Computational Biologist / Bioinformatics Data Scientist
We offer an exciting opportunity for a Computational Biologist / Bioinformatics Data Scientist to join our world-leading institution at James Cook University (JCU). A full time, fixed term appointment to 31 December 2024, this position is based at JCU Bebegu-Yumba campus in Townsville.

Position Overview

James Cook University (JCU) is a world leader in specific areas of the molecular life sciences, and tropical/infectious diseases. The aim of this recruitment is to strengthen our bioinformatics capacity to support our studies related to human health and tropical disease.

The Computational Biologist / Bioinformatics Data Scientist will work in the areas of bioinformatics software development, multi-omics data analysis, RNA biology and cancer. We are currently investigating the roles of alternative splicing, epigenetics, and post-transcriptional gene regulation in cancer and other non-communicable diseases. The aim is to develop computational workflows, software tools, and databases to study aberrant gene regulation in cancer and the cross-talk between gene-regulatory mechanisms.

Emphasis will be placed on the analysis and integration of long-read sequencing and multi-omics data. The incumbent will conduct innovative research under the supervision of A/Prof Ulf Schmitz (research.jcu.edu.au/portfolio/ulf.schmitz/) and will engage in collaborations across JCU divisions, the hospital, as well as other domestic and international partners. This position will be a mix of academic duties that involve both research and teaching. The Computational Biologist / Bioinformatics Data Scientist will contribute to the development and expansion of undergraduate/postgraduate teaching efforts in Bioinformatics. The incumbent will join a dynamic team of research professionals already established in Molecular & Cell Biology (MCB) and Biomedicine at the Townsville Campus of JCU.


Principal Accountabilities

1. Conduct research in bioinformatics/computational biology in relation to basic molecular biology and in non-communicable diseases such as cancer.
2. Contribute bioinformatics expertise to other research conducted in the Division of Tropical Health and Medicine (DTHM).
3. Contribute to the teaching of relevant undergraduate and postgraduate subjects, as required.
4. Contribute to research activities including sourcing and applying for new funding and active publication activity in internationally peer reviewed literature.
5. Act as advisor, of honours or postgraduate research students in area of expertise.
6. Support the University’s commitment to the principles of reconciliation, which exemplify respect for Aboriginal and Torres Strait Islander heritage and the valuing of justice and equity for all Australians.
7. Demonstrate a commitment to the University values.
8. Support the principles of the TropEco program and engage in commitment to JCU sustainability goals and objectives.

Generic Accountabilities

There are generic responsibilities that apply to all James Cook University staff.

1. The **Computational Biologist / Bioinformatics Data Scientist** is required to observe the lawful and reasonable directions, policies, and decisions of the University Council, understand and comply with the Enterprise Agreement, the Statutes and Rules of the University, the policies and decisions of the University Council and other appropriate University authorities, as in force from time to time.
2. The **Computational Biologist / Bioinformatics Data Scientist** is required to demonstrate a personal commitment to ensure personal safety and the safety of others and contribute to the continuous improvement of our WHS performance. This includes the effective implementation and compliance with James Cook University WHS policies, procedures and safe systems of work, together with all relevant legislation, duties and obligations. Contribute to the continuous improvement of our WHS performance.
3. The **Computational Biologist / Bioinformatics Data Scientist** is required to exercise proper discretion in all matters affecting the well-being of the University which involve public writing or speaking in accordance with the University’s Code of Conduct.

Selection Criteria

Selection and appointments will be assessed against selection criteria.

**Essential**

1. A recent PhD (preferably within the last 1-2 years) or about to be awarded a PhD in the relevant areas of bioinformatics, computational biology, software engineering, biostatistics or related disciplines.
2. Extensive experience in
   - development of computational workflows, software tools, and web resources
   - pipeline/algorithm development and implementation in R, Python, shell scripts
   - next generation sequencing data analysis (long-read RNA-Seq, WGS, ChIP-Seq, WGBS)
   - web programming, database design
   - statistical modelling, machine learning and deep learning
3. Demonstrated ability to conduct internationally recognised research in life sciences using bioinformatics methods, as evidenced by track record (e.g. publication of peer-reviewed publications).
4. Demonstrated ability to contribute to journal articles and grant applications.
5. Undergraduate and postgraduate teaching experience, commensurate with current level.
6. Strong interpersonal, written and communication skills and the ability to function well in a multidisciplinary environment.

**Desirable**

1. A strong background in statistics and/or application of statistics for data analysis.
2. Experience with systems biology and/or systems medicine workflows.
3. Capacity to develop and deliver research methods subjects (i.e., bioinformatics) to both health-and science-oriented students.
4. Demonstrated ability to provide supervision of higher research degree students, or capacity to do so.

How to Apply

Visit Careers at the JCU website (www.jcu.edu.au/careers-at-jcu) - vacancy reference 17672 or contact A/Prof Ulf Schmitz (ulf.schmitz@jcu.edu.au)