POSITION DESCRIPTION

THE UNIVERSITY OF MELBOURNE

School of BioSciences
Faculty of Science

Genomic Data Specialist

POSITION NO	0041684
CLASSIFICATION	Level B
SALARY	$95,434 - $113,323 p.a.
SUPERANNUATION	Employer contribution of 9.5%
EMPLOYMENT TYPE	Full-time (fixed-term) position available for 2 years Fixed term contract type: Specific task or project Work Focus Category: Academic Specialist
OTHER BENEFITS	http://about.unimelb.edu.au/careers/working/benefits
CURRENT OCCUPANT	New
How to Apply	Online applications are preferred. Go to http://about.unimelb.edu.au/careers, under 'Job Search and Job Alerts', select the relevant option ('Current Staff' or 'Prospective Staff'), then find the position by title or number.
CONTACT FOR ENQUIRIES ONLY	A/Prof Mike Inouye Tel + 61 3 9035 8659 Email: minouye@unimelb.edu.au A/Prof Stephen Leslie Tel + 61 3 8344 0441 Email: stephen.leslie@unimelb.edu.au *Please do not send your application to these contacts*

For information about working for the University of Melbourne, visit our websites:

about.unimelb.edu.au/careers
joining.unimelb.edu.au

Position Summary

This Genomic Data Specialist develops and manages data resources and analytical pipelines for the Centre for Systems Genomics, a cross-faculty research hub at the University of Melbourne focused on systems biology and genomics.

The Genomic Data Specialist works with senior academics in the Centre, with support from staff in multiple University IT services and computational platforms, including VLSCI and eResearch, to develop and manage the data resources of the Centre including omics datasets sourced from internal and external studies.

The position works with a range of high-throughput datasets including DNA and RNA sequence and array data (encompassing genomics, transcriptomics, epigenomics and microbiome applications) as well as metabolomics, proteomics and other phenotypic screening data.

This position will be appointed in the School of BioSciences (Faculty of Science). The appointee will interact with School administration and report jointly to A/Prof Michael Inouye (Deputy Director of the Centre) and A/Prof Stephen Leslie. They will liaise with the Centre's partner Faculty of Medicine, Dentistry and Health Sciences as well as the Melbourne School of Engineering.

1. Selection Criteria

1.1 ESSENTIAL

- PhD or equivalent in the area/s of life or quantitative science.
- Evidence of independent research in genetics, genomics, computational biology or bioinformatics including significant experience in computational data analysis.
- Demonstrated ability to use Unix-based systems, compute clusters and related queuing systems, modern scripting/programming languages, including R.
- Demonstated experience in managing large datasets and establishing analysis pipelines, including those for basic sequence/genomic data quality control and processing, including standard read mapping and variant calling software and formats.
- Demonstated experience with analyzing data derived from a range of techniques, including some of DNA/RNAseq, 16S microbiome, SNP array, gene expression array and/or metabolomics data.
- Demonstrated ability to contribute to high impact research publications.
- A high level of independence and initiative, and demonstrated ability to consistently produce high quality results and manage competing priorities.
- Outstanding interpersonal and communication skills, both oral and written, with the ability to engage with researchers and stakeholders, of all levels of experience, in an interdisciplinary setting.

1.2 DESIRABLE

- Experience with database design and management.
- Knowledge of common statistical methods underlying genomic analyses.

2. Special Requirements

- None

3. Key Responsibilities

- Work with the Centre research group leaders to coordinate access, usage and analysis of in-house and external datasets and analytical pipelines.
- Support the Centre's research activities by liaising with University computational platforms on provision of computing, data and software development to the Centre.
- Assist with preparation of applications and access agreements with external collaborators and databanks, both incoming and outgoing.
- Support the Centre's research activities and advise on optimal analysis software and pipelines.
- Assist with preparation of research publications and grant applications where relevant.
- Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in section 5.

4. Other Information

4.1 ORGANISATIONAL UNIT

SCHOOL OF BIOSCIENCES

http://biosciences.unimelb.edu.au

The School of BioSciences was formed in 2015 through the amalgamation of the School of Botany and the Departments of Genetics and Zoology thus bringing together a critical mass of 160 Academic staff and 240 Research Higher Degree students undertaking world class teaching and research in the biological sciences. Academics within the School are aligned to four research clusters: Ecology, Evolution and Environmental Science; Genetics, Genomics and Development; Plant Science and Computational Biology. Through cross-disciplinary collaborations within the School and with external partners the School is a major recipient of grant and contract funding.

CENTRE FOR SYSTEMS GENOMICS

The School is a major contributor to the Bachelor of Science, Bachelor of Biomedical Science and the Environmental Science programs, its teaching program reflecting the research interests within the School. The Centre for Systems Genomics (sysgenmelb.org) works on the investigation and interpretation of natural genetic, molecular and phenotypic variation in populations. Systems genomics is a data-driven approach that integrates multiple types of data (e.g. genomic, transcriptomic, proteomic, metabolomic and the microbiome) generated from the same individuals, in order to understand the genetic basis of variation in functionality of a biological system. The members of the Centre are drawn from various disciplines in Science, Medicine and Engineering. Its six research groups, totalling about 50 researchers, occupy newly-refurbished premises on Royal Parade, which includes an integrative genomic profiling lab. The Centre's dedicated computing cluster is hosted by the Victorian Life Sciences Computation Initiative.

4.2 FACULTY OF SCIENCE

http://www.science.unimelb.edu.au

Science at the University of Melbourne is the most highly ranked Faculty of Science in Australia.* Science is defined by its research excellence in the physical and life sciences and is at the forefront of research addressing major societal issues from climate change to disease. Our discoveries help build an understanding of the world around us.

We have over 150 years of experience in pioneering scientific thinking and analysis, leading to outstanding teaching and learning and offer a curriculum based on highly relevant research, which empowers our STEM students and graduates to understand and address complexities that impact real world issues and the challenges of tomorrow.

We aspire to engage the broader community with the impact that Science has on our everyday lives. Through the strength of our internships and research project offerings, our students are provided opportunities to engage with industry partners to solve real-world issues.

The Faculty of Science has over 40,000 alumni and is one of the largest faculties in the University comprising seven schools: BioSciences, Chemistry, Earth Sciences, Ecosystem and Forest Sciences, Geography, Mathematics and Statistics, and Physics.

The Faculty is custodian of the Bio21 Molecular Science and Biotechnology Institute, Office for Environmental Programs and home to numerous Centres.

Science manages more than $280 million of income per annum, with a staff base in the order of 220 professional staff, and more than 540 academic staff.

We offer a range of undergraduate, honours, graduate and research degrees; enrolling over 7,500 undergraduate and graduate students. The Faculty of Science is the custodial Faculty for the BSc (Bachelor of Science) with enrolments of approximately 6,200 students.

The Faculty of Science is a leader in research, contributing approximately $50 million in HERDC income per annum. The Faculty of Science is highly research focused, performing strongly in the ARC competitive grants schemes, often out-performing the national average. The Faculty of Science is currently growing its competitiveness and standing in the NHMRC space.

The Faculty of Science provides community services and industry partnerships based on a solid foundation of research in the pure and applied sciences. The Faculty has an endowment of approximately $50 million. The annual income from the endowment supports more than 120 prizes, scholarships and research awards.

http://www.science.unimelb.edu.au/departments

*Figures from the latest available data for 2015, including published international rankings data.

4.3 THE UNIVERSITY OF MELBOURNE

The University of Melbourne is a leading international university with a tradition of excellence in teaching and research. With outstanding performance in international rankings, Melbourne is at the forefront of higher education in the Asia-Pacific region and the world. The University of Melbourne is consistently ranked among the world's top universities. Further information about our reputation and global ranking is available at http://futurestudents.unimelb.edu.au/explore/why-choose-melbourne/reputation-rankings.

Established in 1853, shortly after the founding of Melbourne, the University is located just a few minutes from the centre of this global city. The main Parkville campus is recognised as the hub of Australia's premier knowledge precinct comprising eight hospitals, many leading research institutes and a wide range of knowledge-based industries.

The University employs people of outstanding calibre and offers a unique environment where staff are valued and rewarded. Further information about working at The University of Melbourne is available at http://about.unimelb.edu.au/careers.

4.4 GROWING ESTEEM, THE MELBOURNE CURRICULUM AND RESEARCH AT MELBOURNE: ENSURING EXCELLENCE AND IMPACT TO 2025

- Growing Esteem describes Melbourne's strategy to achieve its aspiration to be a public-spirited and internationally-engaged institution, highly regarded for making distinctive contributions to society in research and research training, learning and teaching, and engagement. http://about.unimelb.edu.au/strategy-and-leadership
- The University is at the forefront of Australia's changing higher education system and offers a distinctive model of education known collectively as the Melbourne Curriculum. The new educational model, designed for an outstanding experience for all students, is based on six broad undergraduate programs followed by a graduate professional degree, research higher degree or entry directly into employment. The emphasis on academic breadth as well as disciplinary depth in the new degrees ensures that graduates will have the capacity to succeed in a world where knowledge boundaries are shifting and reforming to create new frontiers and challenges. In moving to the new model, the University is also aligning itself with the best of emerging European and Asian practice and well-established North American traditions.
- The University's global aspirations seek to make significant contributions to major social, economic and environmental challenges. Accordingly, the University's research strategy *Research at Melbourne: Ensuring Excellence and Impact to 2025* aspires to a significant advancement in the excellence and impact of its research outputs. http://research.unimelb.edu.au/index.html#home
- The strategy recognises that as a public-spirited, research-intensive institution of the future, the University must strive to make a tangible impact in Australia and the world, working across disciplinary and sectoral boundaries and building deeper and more substantive engagement with industry, collaborators and partners. While cultivating the fundamental enabling disciplines through investigator-driven research, the University has adopted three grand challenges aspiring to solve some of the most difficult problems facing our world in the next century. These Grand Challenges include:
  - Understanding our place and purpose – The place and purpose grand challenge centres on understanding all aspects of our national identity, with a focus on Australia's 'place' in the Asia-Pacific region and the world, and on our 'purpose' or mission to improve all dimensions of the human condition through our research.
  - Fostering health and wellbeing – The health and wellbeing grand challenge focuses on building the scale and breadth of our capabilities in population and global health; on harnessing our contribution to the 'convergence revolution' of biomedical and health research, bringing together the life sciences, engineering and the physical sciences; and on addressing the physical, mental and social aspects of wellbeing by looking beyond the traditional boundaries of biomedicine.

- Supporting sustainability and resilience – The sustainability and resilience grand challenge addresses the critical issues of climate change, water and food security, sustainable energy and designing resilient cities and regions. In addition to the technical aspects, this grand challenge considers the physical and social functioning of cities, connecting physical phenomena with lessons from our past, and the implications of the technical solutions for economies, living patterns and behaviours.
- Essential to tackling these challenges, an outstanding faculty, high performing students, wide collaboration including internationally and deep partnerships with external parties form central components of Research at Melbourne: Ensuring Excellence and Impact to 2025.

4.5 EQUITY AND DIVERSITY

Another key priority for the University is access and equity. The University of Melbourne is strongly committed to an admissions policy that takes the best students, regardless of financial and other disadvantage. An Access, Equity and Diversity Policy Statement, included in the University Plan, reflects this priority.

The University is committed to equal opportunity in education, employment and welfare for staff and students. Students are selected on merit and staff are selected and promoted on merit.

4.6 GOVERNANCE

The Vice Chancellor is the Chief Executive Officer of the University and responsible to Council for the good management of the University.

Comprehensive information about the University of Melbourne and its governance structure is available at http://www.unimelb.edu.au/unisec/governance.html.

5. Occupational Health and Safety (OHS)

All staff are required to take reasonable care for their own health and safety and that of other personnel who may be affected by their conduct.

OHS responsibilities applicable to positions are published at:

http://safety.unimelb.edu.au/topics/responsibilities/

These include general staff responsibilities and those additional responsibilities that apply for Managers and Supervisors and other Personnel.