



POSITION DESCRIPTION

Department of Microbiology and Immunology
Faculty of Medicine, Dentistry and Health Sciences

Data Management Officer – COVID-19 Genomics (MDU PHL)

POSITION NO	0050777
CLASSIFICATION	UOM 6
SALARY	\$85,134 – \$92,154 p.a.
SUPERANNUATION	Employer contribution of 9.5%
WORKING HOURS	Full-time
BASIS OF EMPLOYMENT	Fixed term for 12 months Fixed term contract type: Externally Funded contract
OTHER BENEFITS	http://about.unimelb.edu.au/careers/working/benefits
HOW TO APPLY	Online applications are preferred. Go to http://about.unimelb.edu.au/careers , select the relevant option ('Current Staff' or 'Prospective Staff'), then find the position by title or number.
CONTACT FOR ENQUIRIES ONLY	Dr Norelle Sherry Tel: +61 418 307 396 Email: norelle.sherry@unimelb.edu.au <i>Please do not send your application to this contact</i>

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about.unimelb.edu.au/careers

Position Summary

The Microbiological Diagnostic Unit Public Health Laboratory (MDU PHL) provides reference laboratory services for the state, national and regional public health community. Working closely with public health authorities and diagnostic laboratories MDU PHL conducts and advises on the detection and characterisation of bacterial, viral and fungal pathogens for the identification, surveillance and control of infectious diseases, and is a leader in the implementation of public health genomics globally. MDU PHL is committed to remaining on the forefront of public health and microbiological practice, leading and participating in translational research activities, national and international collaborations and training programs.

Bioinformatics at MDU is responsible for quality control, management and analysis of microbial whole genome sequence data, including the development of bioinformatics tools, and contribute to analysis at various levels from detection of antimicrobial resistance determinants through to outbreak investigations using phylogenomic methods. Working closely with the MDU Epidemiology Section, the Section works across a wide range of infectious diseases and pathogens, conducting both routine and ad hoc bioinformatics analysis and interpretations.

The data manager, reporting to the Senior Medical Microbiologist, will work primarily in the COVID-19 genomics and diagnostic activities of MDU PHL in supporting national and jurisdictional phylogenetic collection, tabulation of SARS-CoV-2 sequence and epidemiological metadata for public health action. This position will have a particular focus on the comprehensive data collection and analysis of laboratory, clinical and epidemiological data used to inform MDU's genomics activity in Victoria. The role will also be expected to work closely with state and federal government, private and public diagnostic laboratories and clinical experts to collate and tabulate data that will inform the interpretation of results and subsequent diagnosis. The data manager may also be required to perform similar duties for other programs coordinated by the Bioinformatics Section.

1. Key Responsibilities

- ▶ Under the leadership of the Senior Medical Microbiologist, act as a laboratory/data managing liaison between MDU, VIDRL and public and private laboratories conducting SARS-CoV-2 sequencing and diagnostic testing and state and federal government to collect genomic, laboratory, epidemiological and clinical data.
- ▶ Develop a method and database for the collection, tabulation and analysis of state and national data collected for each positive sample for genomic analysis, investigation, and reporting.
- ▶ Maintain the quality control of data collected and reporting of misalignment of results where identified – troubleshooting where necessary
- ▶ In consultation with the Director and Senior Medical Microbiologist and relevant sections (including Epidemiology and Bioinformatics), assist with the interpretation and analysis of data collected, with a focus on COVID-19 cases under investigation.
- ▶ Assist with the drafting of briefings and reports to the Director and relevant government on analysis findings, with potential for the development of an associated research paper.
- ▶ Occupational Health and Safety (OH&S) and Environmental Health and Safety (EH&S) responsibilities as outlined in section 5.

2. Selection Criteria

2.1 ESSENTIAL

- ▶ A postgraduate qualification in Data Analytics, Computer Science, Microbiology, Public Health, Bioinformatics (or relevant degree)
- ▶ Demonstrated ability to create and manage (including migrations) of SQL databases (especially PostgreSQL) new databases for the collection and analysis of raw metadata in different formats and from a range of resources.
- ▶ Demonstrated capacity in fostering networks and the ability to communicate effectively with public and private diagnostic laboratories and government for the collection of data.
- ▶ Superior time management, analytical and organisational skills allowing prioritisation, problem solving and timely, accurate completion of tasks
- ▶ Capability to record scientific data and results of analyses in both conventional hardcopy and electronic forms
- ▶ Strong interpersonal skills and the ability to function and interact as a team member
- ▶ Ability to adapt to periodic pressures of the workplace, where large numbers of analyses need to be performed rapidly with a high degree of analytical initiative and the ability to work in a self-directed manner
- ▶ Commitment to a code of ethics and compliance to the highest professional standards of integrity.

2.2 DESIRABLE

- ▶ Experience working with Next Generation Sequencing, diagnostic laboratory data and phylogenomics
- ▶ Experience working in a public health setting (Epidemiology, diagnostic laboratory, public service)
- ▶ Demonstrated capacity to design and implement comprehensive data capturing and management approaches
- ▶ Demonstrated service to national and international professional bodies

2.3 SPECIAL REQUIREMENTS

- ▶ Sign and abide by confidentiality and information use agreement
- ▶ Flexibility in work patterns in the face of pressing needs and requirement to perform out of hours work when the need arises.
- ▶ Short-term interstate or international travel may be required
- ▶ Undergo police and security checks as a condition of employment with the University of Melbourne
- ▶ Vaccination against relevant infectious diseases is recommended and provided.

3. Job Complexity, Skills, Knowledge

3.1 LEVEL OF SUPERVISION / INDEPENDENCE

The Data Manager will report to the Senior Medical Microbiologist and work collaboratively with bioinformaticians and staff from other sections. They will have responsibility for maintaining appropriate standards of data management and reporting for analysis in a hands-on-role. Within existing protocols and guidelines, the incumbent will have general independence in the application of best practices in data analysis, in day to day decision making and will have the authority to direct data entry staff to achieve all required tasks.

3.2 PROBLEM SOLVING AND JUDGEMENT

The position will be required to exercise judgement in the formation and undertaking of data collection and tabulation and to troubleshoot and adapt recording to the data needs of Bioinformatics and Epidemiology sections of MDU PHL. This position is expected to work cohesively across both sections, develop data management protocols and may be expected to contribute to the development and implementation of new data capturing and management protocols. The incumbent will be required to take corrective action, where possible, in the event of data mismanagement and advise senior staff accordingly.

3.3 PROFESSIONAL AND ORGANISATIONAL KNOWLEDGE

The position requires a postgraduate qualification in Data Analytics, Computer Science, Microbiology, Bioinformatics or a related field and will further develop from both specific workplace training and a practical experience in performing analyses. Central to this knowledge acquisition will be a parallel understanding of good scientific data practice, linking theoretical data with practical capability. The incumbent is expected to understand and adhere to MDU PHL Standard Operating Procedures and other relevant protocols and perform in a professional environment that is subject to independent audit practices. Active membership in relevant professional organisations is desirable.

3.4 RESOURCE MANAGEMENT

The position will provide status reports on the progress of activities to the Medical Microbiologist and others, as directed. The position will provide advice and training to bioinformatics and epidemiology staff, and liaise with staff across all sections, including laboratory staff.

3.5 BREADTH OF THE POSITION

The position covers the Bioinformatics Section and any other bioinformatics and epidemiology activities performed at MDU PHL. This involves the collection, collation and tabulation of diagnostic (primarily molecular results) and genomic data. The position will also require participation in evaluations, acquisition of competence in new procedures and maintaining quality systems and documentation that will meet third party audit requirements. This position will be required to liaise external partners including public and private diagnostic laboratories and state and national government where required.

4. Equal Opportunity, Diversity and Inclusion

The University is an equal opportunity employer and is committed to providing a workplace free from all forms of unlawful discrimination, harassment, bullying,

vilification and victimisation. The University makes decisions on employment, promotion and reward on the basis of merit.

The University is committed to all aspects of equal opportunity, diversity and inclusion in the workplace and to providing all staff, students, contractors, honorary appointees, volunteers and visitors with a safe, respectful and rewarding environment free from all forms of unlawful discrimination, harassment, vilification and victimisation. This commitment is set out in the University's People Strategy 2015-2020 and policies that address diversity and inclusion, equal employment opportunity, discrimination, sexual harassment, bullying and appropriate workplace behaviour. All staff are required to comply with all University policies.

The University values diversity because we recognise that the differences in our people's age, race, ethnicity, culture, gender, nationality, sexual orientation, physical ability and background bring richness to our work environment. Consequently, the People Strategy sets out the strategic aim to drive diversity and inclusion across the University to create an environment where the compounding benefits of a diverse workforce are recognised as vital in our continuous desire to strive for excellence and reach the targets of Growing Esteem.

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/people/community/responsibilities-of-personnel>

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

6. Other Information

6.1 DEPARTMENT OF MICROBIOLOGY & IMMUNOLOGY

The Department of Microbiology & Immunology is one of the departments within the School of Biomedical Sciences in the Faculty of Medicine, Dentistry and Health Sciences.

Further information is available at <http://www.microbiol.unimelb.edu.au/> and <http://bsac.unimelb.edu.au/>.

6.2 THE MICROBIOLOGICAL DIAGNOSTIC UNIT PUBLIC HEALTH LABORATORY

The Microbiological Diagnostic Unit (MDU PHL) is a public health laboratory for the Department of Health, Victoria situated within the Department of Microbiology and Immunology at the University of Melbourne. The MDU has been established for over 100 years on External State Government funding.

The MDU PHL is concerned with provision of services for the laboratory diagnosis of diseases of public health importance, the application of typing methods, the use of computer-based data collection systems for epidemiological purposes, and provision of expert opinion. In addition, the Unit undertakes the microbiological examination of foods and water for compliance with regulatory and voluntary codes and standards. MDU PHL is NATA accredited for Biological testing, including Forensic Operations, NATA/RCPA accredited for Medical testing and performs selected veterinary testing.

6.3 THE PETER DOHERTY INSTITUTE FOR INFECTION AND IMMUNITY

The Doherty Institute is a world-class institute combining research in infectious disease and immunity with teaching excellence, reference laboratory diagnostic services, epidemiology and clinical services. It is a joint venture between the University of Melbourne and Melbourne Health.

A new, purpose-built building for the Doherty Institute was completed in early 2014. The members of the Doherty include the Department of Microbiology and Immunology and the Microbiological Diagnostic Unit Public Health Laboratory of the University of Melbourne, the Victorian Nosocomial Infection Surveillance System, The Victorian Infectious Diseases Reference Laboratory, The Victorian Infectious Diseases Service, and The World Health Organisation Collaborating Centre for Reference and Research on Influenza.

Further information about the Doherty Institute is available at:

<http://www.doherty.unimelb.edu.au>

6.4 FACULTY OF MEDICINE, DENTISTRY AND HEALTH SCIENCES

The Faculty of Medicine, Dentistry and Health Sciences (MDHS) plays a vital role in the delivery of the University of Melbourne's Strategic Plan 2015-2020: Growing Esteem by providing current and future generations with education and research equal to the best in the world. It is Australia's largest and leading biomedical research faculty. It employs more than 1,700 members of staff, has more than 8,000 students, and total revenue of \$607 million for 2015. Reflecting the complexity of today's global health landscape, the Faculty is made up of six different Schools and four Strategic Research Initiatives, and draws together all areas of human health, ranging from the most basic to the most applied areas of research. The Faculty contributes close to 50 per cent of research conducted at the University.

The Faculty has appointed Australia's first Associate Dean (Indigenous Development) to lead the development and implementation of the Faculty's Reconciliation Action Plan (RAP), which will be aligned with the broader University – wide plan. To enable the Faculty to improve its Indigenous expertise knowledge base, the Faculty's RAP will address Indigenous employment, Indigenous student recruitment and retention, Indigenous cultural recognition and building partnerships with the Indigenous community as key areas of development.

Further information about the Faculty is available at:

<http://www.mdhs.unimelb.edu.au>

6.5 THE UNIVERSITY OF MELBOURNE

Established in 1853, the University of Melbourne is a leading international university with a tradition of excellence in teaching and research. The main campus in Parkville 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. With outstanding performance in international rankings, the University is at the forefront of higher education in the Asia-Pacific region and the world.

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>.

6.6 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/our-research/research-at-melbourne>

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.

6.7 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/governance>