ASSOCIATE PROFESSOR (RESEARCH) - NATIONAL CENTRE FOR HEALTHY AGEING (NCHA) DATA PLATFORM – TECHNICAL AND INFORMATICS LEAD

DEPARTMENT/UNIT
Peninsula Clinical School, Central Clinical School

FACULTY/DIVISION
Faculty of Medicine, Nursing and Health Sciences

CLASSIFICATION
Level D

WORK LOCATION
Peninsula Clinical School, Frankston Hospital.

ORGANISATIONAL CONTEXT

Monash is full of thinkers and doers who are looking for their next challenge. So if you’ve forged a rewarding career so far, this role provides the perfect platform to join us. You’ll have access to quality research facilities, infrastructure and teaching spaces to do exciting work, along with opportunities to collaborate internationally. You’ll be part of a university that’s made up of inspirational, challenging thinkers and doers – and continue doing work that makes a lasting impact. Discover more at www.monash.edu.

The Faculty of Medicine, Nursing and Health Sciences, is the largest faculty at Monash University, and offers the most comprehensive suite of professional health training in Victoria. We consistently rank in the top 40 universities worldwide for clinical, pre-clinical and health sciences.

We want to improve the human condition. That is our vision - it has no expiration date. Through academic health centres, other translational models and by educating the healthcare workforce of the future, our staff, students and alumni directly improve quality of life.

Setting the global health care agenda, the Faculty aspires to lead in all areas of research activity and influence local, national and international policy to improve health and social outcomes and health inequalities. We’ve made a major impact in the world of medical research and become globally recognised for our quality education of over 41,000 doctors, nurses, and allied health professionals.

We are ambitious and aim to maintain our position as a leading international medical research university. We’re recognised for the breadth and depth of our research, for our commitment to translational research, for the quality and scale of our research capability, and as a thriving biotechnology hub.

To learn more about the Faculty, please visit monash.edu/medicine.
Central Clinical School encompasses the Departments of Anaesthesia and Perioperative Medicine, Clinical Haematology, Immunology and Pathology, Diabetes, Infectious Diseases, Gastroenterology, Allergy and Respiratory Medicine, Neuroscience, Medicine and Surgery. CCS also includes the Melbourne Sexual Health Centre, Monash Alfred Psychiatry research centre and the National Trauma Research Institute. It is located at the Alfred Hospital precinct in Melbourne, known as AMREP (Alfred Medical Research and Education Precinct). The school is involved in teaching students from both the Faculty of Medicine, Nursing and Health Sciences and the Faculty of Science and its teaching and research is conducted at Alfred Health, Cabrini, Epworth Richmond, Peninsula Health and at Clayton.

Peninsula Health is one of Victoria’s 15 major metropolitan health services. It is a teaching hospital of Monash University and also provides postgraduate pre-vocational and vocational training in a range of specialties. Peninsula Health provides a comprehensive range of acute, rehabilitative, aged care, palliative, residential, psychiatric and community health services from 13 sites to a population of approximately 300,000 people at Frankston and surrounding suburbs and on the Mornington Peninsula.

Peninsula Health employs nearly 5,000 staff of all disciplines with 250 Senior Medical Staff and 250 Junior Medical Staff. Clinical services are provided under Clinical Directorates managed by Clinical (senior medical) and Operations Directors (nursing and allied health). There are two busy Emergency Departments at the Frankston and Rosebud Hospital sites with over 70,000 presentations pa and there are over 50,000 separations across all sites. A new state-of-the art Theatre, ICU and Cardiac Angiography complex has just been completed.

Specific services provided include Emergency and Ambulatory, Medicine and Critical Care, Surgery and Anaesthetics, Women’s Health, Paediatrics, Aged Care Medicine, Rehabilitation, Palliative Care, and Psychiatry. There are four Community Health sites and there is a strong focus on integrated and ambulatory care. There are good links with General Practice and other local healthcare providers.

Overview of the National Centre for Healthy Ageing

Monash University and Peninsula Health have partnered to establish the National Centre for Healthy Ageing (NCHA), with initial funding of $32m from the Australian Government Department of Health to create a centralised hub for innovation and transformation of care practices to support the healthy ageing of all Australians. The NCHA will create better integrated care models to promote health and wellbeing across the lifespan and drive improvements in the way people seek out and access care, to ensure they reflect and align with their values and needs. During its first 5 years, the NHCA will establish brand new state-of-the-art NCHA facilities and platforms to support advanced research and development activity, making sure that the NCHA can be at the forefront of healthy ageing research, solution development, testing and implementation in an ongoing way. During this time the NHCA will also undertake a series of research programs that will address some of our major barriers to healthy ageing. A priority activity is the establishment of a Health Data and Implementation Platform (Data Platform) at Peninsula Health that will enable testing of models of care through enhanced data linkage.

POSITION PURPOSE

A Level D research-only academic is expected to make major original contributions to the research enterprise of the area in which they are appointed and to play a significant role within their profession or discipline. Academics at this level may be appointed in recognition of marked distinction in their area of research or scholarship.

The Associate Professor will take on the role of Data Platform – Technical and Informatics Lead and will be responsible for overseeing the technical development of the Data Platform to ensure it meets the technical and research requirements for the National Centre for Healthy Ageing. The incumbent will be expected to have a deep and thorough understanding of the data related technical and implementation requirements of the platform. They will also be expected to make independent and original contributions to support the activities of the Data Platform and assist in obtaining external funding to support the development of novel technical applications of
the Data Platform that seek to enhance and position the platform for future sustainability. The position will work closely with the Data Platform – Research Data Lead.

The Associate Professor will lead the technical development and implementation of the Data Platform, including working closely with the Peninsula Health MIS team, IT staff and others stakeholders to scope, design and implement the technical requirements of the Research Data Platform. Including ensuring appropriate and reliable access to the data warehouse and clinical information systems, and specification and installation of hardware required by the platform. A key part of this position is to oversee the design and implementation of the technical aspects of the platform, including the development and deployment of processes required to extract the minimum dataset from the data warehouse and clinical systems; the development and deployment of auditing and cleaning procedures; and computational procedures to support regular updates and ensure long term maintainability of the Platform.

The incumbent will lead the development of technical approaches and solutions to ensure accurate health data linkage with external sources of data. Including establishing mechanisms of external data linkage via cryptographic keys, ensuring the requirements to move data into safe environments are established; and leading the development of tools and processes to support advanced data collection. The incumbent will also supervise and develop a small team of platform staff members (non-academic and technical), including planning and allocating staff resources, developing, coaching and mentoring employees and managing performance to ensure the platform achieves the objectives of the NCHA and end user requirements.

The Associate Professor will build and sustain high-level relationships with an extensive network of colleagues and stakeholders, including liaising closely with NCHA researchers and Peninsula Health clinical, technical, IT and executive staff, to facilitate coordination and cooperation and ensure the delivery of the technical components of the platform aligns with broad stakeholder needs and provide evaluations, recommendations and advice for consideration of strategic decisions, procurement activities and opportunities for technical progression of the platform.

An important element of the role will be to identify future funding opportunities to support the ongoing activities and sustainability of the Data Platform, including leading the preparation of funding proposal submissions to external bodies and building collaborations with national and international leaders in this field. The appointee will also be expected to make independent and original contributions to research that will support the activities of the Data Platform and assist in obtaining external funding to support the development of novel technical applications of the Data Platform and keep abreast of development, activities and protocols in advanced data collection, including health and medical research and data management through relevant professional development and continuous improvement activities and provide advice accordingly.

**Reporting Line:** The position reports to the Professor of Medicine, Monash University, Peninsula Clinical School

**Supervisory Responsibilities:** This position will provide direct supervision to a small team (approximately 2-5) technical staff (academic and non-academic) involved in the development and implementation of the NCHA Data Platform, and assist with the supervision of other data platform personnel in conjunction with the Research Data Lead

**Financial Delegation:** Not applicable

**Budgetary Responsibilities:** Not applicable

**KEY RESPONSIBILITIES**

Specific duties required of a Level D research-only academic may include:

1. The conduct of independent research in relation to the NCHA Data Platform as part of the Data Platform team and within the broader NCHA, including the production of conference and seminar papers and publications from that research

2. Supervision of research-support and administrative staff involved in the NCHA Data Platform
3. A major role in all aspects of major research projects related to the NCHA Data Platform, including management and/or leadership of large research projects or teams as part of the NCHA

4. Supervision of the research of less senior research-only Academic staff involved in the NCHA Data Platform

5. Promotion of research links with outside bodies and building collaborations with national and international leaders aligned with the NCHA Data Platform

6. Preparation of research proposal submissions to external bodies in relation to the NCHA Data Platform

7. Responsibility for the oversight of financial management of grants related to the NCHA Data Platform

8. Involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise, including clinical translation of computational methods and data management research approaches

9. Occasional contributions to the teaching program within the field of the staff member’s research

10. Supervision of major honours or postgraduate research projects related to the NCHA Data Platform

11. Higher level research-related administrative functions related to the NCHA Data Platform

12. Some involvement in the development of research policy related to the NCHA Data Platform

13. Attendance at meetings associated with research or the work of the NCHA and the NCHA Data Platform and a major role in planning and undertaking work

14. Significant contribution in the areas of data collection, including health and medical research and data management research approaches

KEY SELECTION CRITERIA

Education/Qualifications

1. The appointee will have:
   - A doctoral qualification in the relevant discipline area (Engineering, Statistics or Computer Science) or equivalent accreditation and standing together with significant subsequent research experience and profile

Knowledge and Skills

2. Evidence of a national profile in the relevant discipline with an emerging trajectory of being an international leader in the field and demonstrated experience in clinical translation of computational methods

3. A significant record of publishing research relevant to the role in high quality international journals with a demonstrated ability to generate research income, including from both traditional and more innovative sources of research funding and a demonstrated experience in overseeing the reporting and governance issues associated with external funding sources

4. Demonstrated skills and experience in managing and/or leading large research projects or teams within a laboratory environment, including direct supervision of research staff

5. A deep understanding of the research environment and an ability to interact and communicate with researchers as part of an effective inter-disciplinary research team and a track record of delivering research services to multi-disciplinary teams

6. Strong record of successful supervision of major honours and postgraduate research projects

7. Excellent organisational skills with the ability to work under pressure and to prioritise tasks to meet deadlines and project timelines

8. Strong work ethic and commitment to team work and ability to work both independently and a demonstrated capacity to work collaboratively as a member of a team and demonstrated leadership skills and capability,
including experience in supervising, mentoring and coaching projects or teams, including direct supervision of research staff to establish and lead a successful research team

9. Expertise with a wide range of data processing techniques and open source tools and experience in a wide range of computing languages - specifically R, python, matlab, bash and C/C++

10. Expertise framing research questions and understanding of limitations in data and expertise in analysis, including algorithm development, of large research datasets of mixed content, for example images, free text and geospatial data

11. Expertise in statistical modelling for medical research and the use of high-performance computing clusters

12. Expertise in research software development, as demonstrated by public release of open source software

13. Experience working with Electronic Medical Record data in a health services

OTHER JOB-RELATED INFORMATION

- Travel to other campuses of the University may be required
- There may be a requirement to work additional hours from time to time
- There may be peak periods of work during which taking of leave may be restricted

GOVERNANCE

Monash University expects staff to appropriately balance risk and reward in a manner that is sustainable to its long-term future, contribute to a culture of honesty and integrity, and provide an environment that is safe, secure and inclusive. Ensure you are aware of and adhere to university policies relevant to the duties undertaken and the values of the University. This is a standard which the University sees as the benchmark for all of its activities in Australia and internationally.