Position description

Research Fellow/Senior Research Fellow (Genomic Data Analyst)

Position number	
Department/Unit	Monash School of Public Health and Preventive Medicine, Department of Epidemiology and Preventive Medicine and Monash Bioinformatics Platform
Faculty/Division	Faculty of Medicine, Nursing and Health Sciences
Classification (salary rates)	Level B/Level C
Employment type	Fixed term (full-time)
Work location	The Alfred Hospital and Clayton campus
Date document created or updated	14 March 2016

Position purpose

An exciting opportunity has opened for a Research Fellow/Senior Research Fellow to join the Monash School of Public Health and Preventive Medicine (SPHPM) and the Monash Bioinformatics Platform at Monash University.

You would be expected to spend your time embedded within the Public Health Genomics Program, SPHPM, while connecting with other members of the Monash Bioinformatics Platform on a regular basis. The Public Health Genomics Program is based at The Alfred Hospital, while the Monash Bioinformatics Platform's core is located at Monash's Clayton campus.

The successful candidate will be highly analytical and motivated by big-data problems, and will assume a leadership role in managing genomic data from collaborative projects. The role will involve sequence analysis combined with application of statistical and computational methods for exploring gene-environment interactions and gene-phenotype relationships. Research will be highly collaborative working with Australian and international collaborators. The role will also involve working closely with biostatisticians and epidemiologists within Monash and providing internal training in the methods of genomic analysis.

Opportunities will exist for conducting research into the genetic architecture of complex traits in diseases such as dementia, cancer, diabetes, and cardiovascular disease. There will also be unique research opportunities in the genetics of healthy ageing and disease resilience, as well as the pharmacogenomics. The primary objective of this role will be to help capitalise on turning large genomic datasets into meaningful research outcomes, and integration of genomic data into large epidemiological studies.

- **Reporting line:** This position reports to the Head of the Public Health Genomics Program.
- **Supervisory responsibilities**: The position will have supervisory responsibilities for biostatisticians, junior bioinformaticians and PhD students.
- **Financial delegation and/or budget responsibilities:** TBC.

Organisational context

Monash is a university of transformation, progress and optimism. Our people are our most valued asset, with our academics among the best in the world and our professional staff revolutionising the way we operate as an organisation. For more information about our University and our exciting future, please visit www.monash.edu.

The **Faculty of Medicine, Nursing & Health Sciences** is the University's largest research faculty. World-class researchers work across disciplines including laboratory-based medical science, applied clinical research, and social and public health research. The Faculty is home to a number of leading medical and biomedical research institutes and groups, and has contributed to advances in many crucial areas. Our expertise in life sciences and biomedicine is recognised both nationally and internationally.

From a teaching perspective, our education curriculum covers a range of disciplines, including medicine, nursing, radiography & medical imaging, nutrition & dietetics, paramedic studies, biomedical sciences, physiotherapy, occupational therapy, behavioural neurosciences and social work. We take pride in delivering outstanding education in all courses, in opening students to the possibilities offered by newly discovered knowledge and in providing a nurturing and caring environment.

To learn more about the Faculty, please visit www.med.monash.edu.au/.

Monash School of Public Health & Preventive Medicine is a teaching and research unit of the Faculty of Medicine, Nursing and Health Sciences and is centred at the Alfred Hospital Campus. It plays a prominent role in public health medicine and works closely with the major Monash affiliated hospitals, research institutes and public health units within Victoria.

For more information about us and the work we do, please visit http://www.med.monash.edu.au/sphpm/.

Monash University has established a network of core Monash Technology Research Platforms (MTRP) each comprising of world leading technologies and expertise. One of these platforms is the **Monash Bioinformatics Platform**. They operate under strong management and governance coordinated by the Office of the Pro Vice-Chancellor (Research and Research Initiatives). Equipped with both state-of-the-art equipment as well as highly trained and dedicated staff they underpin internationally renowned research, education and industry engagement.

Key result areas and responsibility

Research Fellow (Level B)

A Level B research-only academic is expected to carry out independent and/or team research within the field in which he/she is appointed and to carry out activities to develop her/his research expertise relevant to the particular field of research.

- the conduct of research either as a member of a team or independently and the production of conference and seminar papers and publications from that research;
- supervision of research-support staff involved in the staff member's research;
- guidance in the research effort of junior members of research-only Academic staff in her/his research area;
- contribution to the preparation or, where appropriate, individual preparation of research proposal submissions to external funding bodies;
- involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise;

- administrative functions primarily connected with her/his area of research;
- occasional contributions to the teaching program within the field of the staff member's research;
- co-supervision or, where appropriate, supervision of major honours or postgraduate research projects within the field of the staff member's area of research;
- attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental, school and/or faculty meetings and/or membership of a limited number of committees.

Senior Research Fellow (Level C)

A Level C research-only academic is expected to make independent or original contributions to the research effort within her/his field of expertise and to the organisational unit or inter-disciplinary area of which he/she is a part. An academic at this level is expected to play a major role in research including the exercise of some leadership in research.

- the conduct of research and the production of conference and seminar papers and publications from that research;
- supervision of research-support and administrative staff involved in the staff member's research;
- supervision, where appropriate, of the research of less senior research-only Academic staff;
- involvement, where appropriate, in the promotion of research links with outside bodies;
- preparation of research proposal submissions to external funding bodies;
- significant role in research projects including, where appropriate, leadership of research teams or management of projects;
- responsibility for the oversight of financial management of grants received for her/his research projects;
- involvement in professional activities including, subject to availability of funds, attendance at conferences and seminars in the field of expertise;
- occasional contributions to the teaching program within the field of the staff member's research;
- supervision of major honours or postgraduate research projects within the field of the staff member's area of research;
- various research-related administrative functions;
- attendance at meetings associated with research or the work of the organisational unit to which the research is connected and/or at departmental, school and/or faculty meetings and a major role in planning and committee work.

Key selection criteria

Essential Criteria

Research Fellow (Level B)

1. Doctoral qualification, preferably in the area of Genetic Epidemiology, Human Genetics, Statistical Genetics, Biostatistics, Mathematics, Population Genetics, and/or Bioinformatics;
2. Experience in genotyping microarray and/or DNA sequence analysis at large scale;

3. Evidence of an emerging track record of publications and presentations;

4. The ability to work under pressure and to prioritise tasks to meet deadlines;

5. High levels of initiative and flexibility;

6. Well-developed interpersonal and written communication skills;

7. Ability to work both independently and collaboratively as a member of a team;

8. Ability to work efficiently, meet project timelines, and excellent organisational skills.

Senior Research Fellow (Level C)

1. Doctoral qualification, preferably in the area of Genetic E Epidemiology, Human Genetics, Statistical Genetics, Biostatistics, Mathematics, Population Genetics, and/or Bioinformatics;

2. Experience in genotyping microarray and/or DNA sequence analysis at large scale;

3. The ability to work under pressure and to prioritise tasks to meet deadlines;

4. High levels of initiative and flexibility;

5. Well-developed interpersonal and written communication skills;

6. Ability to work both independently and collaboratively as a member of a team;

7. Ability to work efficiently, meet project timelines, and excellent organisational skills;

8. Make independent or original contributions to the research effort;

9. Play a major role in research and exercise some leadership in the research.

***Desired Criteria* (Level B & C)**

1. Experience in the analyses of large-scale genomic data;

2. Proficiency in bioinformatics tools, databases and gene-phenotype analyses;

3. Proficiency in R and in particular various visualizations of genomic data;

4. Programming skills in a common language such as Python or Perl;

5. Experience with the UNIX command line and computing clusters;

6. Experience with human variant projects such as, dbSNP, HapMap, ExAC;

7. Understanding of human genetics, ability to think big.

Other job related information

- Travel will be required between campuses, namely The Alfred Hospital and Clayton campus.
- Some national and international travel to interact with collaborators may be required.
- There may be peak periods of work during which the taking of leave may be restricted.

Legal compliance

Ensure you are aware of and adhere to legislation and University policy relevant to the duties undertaken, including: Equal Employment Opportunity, supporting equity and fairness; Occupational Health and Safety, supporting a safe workplace; Conflict of Interest (including Conflict of Interest in Research); Paid Outside Work; Privacy; Research Conduct; and Staff/Student Relationships.