

## Position description

<b>Position title:</b>	Genomics Senior Research Fellow (R4.1)
<b>Employer:</b>	Baker Heart and Diabetes Institute
<b>Laboratory:</b>	Human Epigenetics
<b>Supervisor/Manager:</b>	Laboratory Head, Epigenetics
<b>Date:</b>	March 2024

### Background

The Baker Heart and Diabetes Institute is an independent, internationally renowned medical research facility focused on cardiovascular disease (including stroke and hypertension), diabetes and their complications, such as kidney disease. We have a long and distinguished history, spanning more than 97 years with our work critical to today's healthcare challenges.

The Baker Institute is well positioned to address these challenges, with multidisciplinary teams comprising medical specialists, scientists and public health experts all focused on translating laboratory findings into new approaches to prevention, treatment and care.

Headquartered in Melbourne, with research teams based in both Melbourne and Alice Springs, we are a key player in research, translation, education, advocacy and health promotion with a staff of more than 450 (including scientists, clinicians and students). Our senior staff represent us on a broad range of government advisory boards, from health and wellbeing to science and innovation. We also collaborate with leading international research groups as part of our commitment to assisting vulnerable communities around the world.

The Baker Institute is funded through a diverse range of sources including competitive grants, Federal and State Governments, service and clinical income and philanthropic support.

### Laboratory

This postdoctoral opportunity is a collaborative project with the Epigenetics in Human Health and Disease team. This work focuses on characterising the functional roles of regulatory proteins critical in gene transcription and examine the link to human disease using genetic, epigenomic and molecular approaches. The program is interested in understanding the transcriptional components in the regulation of metabolic memory and cardiac disease and further extend our understanding epigenetics in pre-clinical studies with a focus on cohort populations. This research will potentially provide tools for novel therapies. These key areas of therapeutic interest emphasising human studies have led to publications of high impact and international recognition.

This program is focused on the epigenetic analyses of prominent international cohorts. We have collected patient material to assess epigenomic indices using ChIP-seq, RNA-seq and Methyl-seq. The project aims to characterise the epigenetic landscape with the progression and development of disease. The aim of the work is to bridge the clinical and preclinical research in our department.

## Position description

### Nature of environment

The Baker Institute has a project-oriented environment, encompassing a local and multi-site (including interstate) organisational structure. The staff comprise mainly research, scientific and specialist clinical personnel engaged in the capacity of permanent, grant specific and casual employment. The atmosphere is collegial, usually relaxed and informal though busy and often dynamic with frequent deadlines that must be met. The environment is often demanding and challenging with a strong team orientation but also provides the opportunity to work independently and show initiative. The nature of the work also requires a focus on accuracy and detail.

### Travel requirements

While travel may be limited initially by COVID-19 and border controls, we anticipate national and international travel to attend conferences and for visits to collaborators.

### Key job requirements, responsibilities and duties

Specific duties required of research trained academic include:

- 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 and Academic staff in their 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 their area of research.
- Occasional contributions to the teaching program within the field of the staff member's research to be coordinated by direct line manager Prof Sam El-Osta.
- 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.

### Supervisory responsibilities

This position provides direct supervision to research staff and supervision of Australian and international students in collaboration with leading universities and institutes in Scandinavia, Asia, Middle East, and Europe.

### Budgetary responsibilities

- The position is responsible for managing ongoing research projects within available budget.

## Position description

It is a requirement of employment that, as part of this position's duties, the employee will actively seek funding for research duties or activities.

This role may be directed to perform other duties as directed by the manager/supervisor from time to time and it is a condition of employment that this role complies with any such reasonable requirement.

### Meet statutory requirements of the Institute

Employees of the Baker Institute must comply with and maintain up to date and accurate knowledge in:

- OHS legislation
- EEO legislation
- Privacy legislation
- Confidential Information Policy
- Baker Heart and Diabetes Institute Code of Conduct
- Baker Heart and Diabetes Institute Values
- Australian Code for the Responsible Conduct of Research
- Baker Heart and Diabetes Institute Intellectual Property Agreement.

### Requirements of position holder

#### Education level

- The appointee will have a doctoral qualification in the relevant discipline area or equivalent qualifications or research experience in Bioinformatics, Computer Science, Biological Sciences, Mathematics, Biostatistics or related fields.

#### Knowledge and skills

- Demonstrated statistical analysis and manuscript and research proposal preparation skills, including a solid track record of refereed research publications.
- You must have experience and technical expertise in the analysis and managing of large-scale sequencing of genomic data (such as whole-genome sequencing, WGS) or epigenetic data (such as whole-genome bisulfite sequencing, WGBS, methylation capture sequencing, ChIP-seq and ATAC-seq).
- You must have specific experience in working with a range of analytical software with proven skills in programming (Python, R, C/C++) and experience with Linux/Unix environments.
- Prior experience working with clinical data mapping software and/or computational researchers involving clinical/epigenetic data.
- Integrate and extend clinical data standards into multiple epigenomic data sharing projects including ENCODE and accessed from UCSC using broad peak bed files.
- Experience in successfully supervising, mentoring, and coaching to support the development of research staff and/or a demonstrated trajectory of leadership capability.

## Position description

- Experience in supervising and working with major honours or postgraduate students within the discipline.
- The position involves genomics and epigenetics expertise for population-based and exploratory studies examining DNA methylation that will include histone modification assessments using comprehensive sequence-based protocols.
- Experience in successfully supervising, mentoring, and coaching to support the development of research staff and/or a demonstrated trajectory of leadership capability.
- Practical experience in supervising and working with honors or postgraduate students within the discipline.

## Communication/interpersonal skills

- A high level of interpersonal skills, which enable the appointee to liaise effectively with a wide range of people at a variety of levels internal and external to the Institute.
- Excellent written and oral communication skills.
- A demonstrated capacity to work in a collegiate manner with other staff in the workplace.
- Advanced computer skills with experience using Microsoft Word, Excel and PowerPoint.
- Experience in working with a range of analytical software.

## Abilities

- The ability to work both independently in a research environment and as part of an interdisciplinary research team.
- High level organisational skills, with demonstrated capacity to establish and achieve goals.
- Demonstrated ability to produce high quality results and to meet deadlines without compromising close attention to detail and accuracy.
- Proven capacity to work as a member of a team as well as autonomously without close supervision.
- Demonstrated ability to lead and contribute to high impact research publications.
- A high level of independence and initiative and demonstrated ability to consistently produce high quality results.
- Demonstrated ability to maintain confidentiality and comply with privacy requirements.

## Summary of position

This is a position for research trained academic who will be expected to carry out independent and/or team research within the field in which they are appointed and to carry out activities to develop their research expertise relevant to the particular field of research.

The Research Fellow will work undertake laboratory research aimed at increasing the understanding of the disease and options to manage diabetic complications.

As the Baker Institute evolves to meet its changing strategic and operational needs and objectives, so will the roles required of its staff members. As such, staff should be aware that this document is not intended to represent the position which the occupant will perform in perpetuity.

## Position description

This position description is intended to provide an overall view of the incumbent's role as at the date of this statement. In addition to this document, the specifics of the incumbent's role will be described in Key Performance Indicators (KPIs) developed by the incumbent and relevant supervisor as part of the Baker Institute's performance appraisal and development process.

The Baker Institute is an Equal Opportunity Employer and we encourage interest from Aboriginal and Torres Strait Islanders and members of the LGBTIQ+ community for roles within the Institute. We value diversity, inclusivity, gender equity and we promote family-friendly practices. We are a proud recipient of an inaugural Athena SWAN Bronze Award from Science in Australia Gender Equity (SAGE).