THE UNIVERSITY OF WESTERN AUSTRALIA

POSITION DESCRIPTION

Position Title	Postdoctoral Research Associate
Classification	Level A, Step 8 (Research)
School/Division	UWA Medical School
Centre/Section	Centre for Medical Research
Supervisor Title	Professor
Supervisor Position Number	322188
Position Number	

Your work area

The Harry Perkins Institute of Medical Research (the Perkins) conducts innovative research into the diseases that most affect our families in the WA community and the world at large.

The Perkins was established in 1998 to unify Western Australian scientists in a collaborative research powerhouse. In the years since, we have grown to become one of the nation's leading medical research centres, where a close-knit team of more than 250 research and trial staff work together to defeat the major diseases that impact our community – diseases like cancer, heart disease, diabetes, and rare genetic diseases.

The Genome Biology and Genetic Diseases Program at the Perkins focuses on factors that affect health and well-being at the genetic, protein and population levels, with the common aim of improving diagnosis and treatment of disease.

Reporting structure

Reports to: Professor

Your role

As the appointee, you will under limited direction work as part of a team to further the goals of the Epigenetics Laboratory at the Harry Perkins Institute of Medical Research (the Perkins or Institute). The appointee will be working with other researchers to provide support for computational modelling, artificial intelligence, and machine learning, and other related technologies towards epigenetic modifications in aging and other disease states. The appointee will also provide supervisory support of junior research staff and students.

Your key responsibilities

Contributes to research outcomes within the discipline or area of expertise

- Promote internationally competitive and collaborative research in the Institute in line with University policies and procedures.
- Provide computational support for the research team and initiate cross-disciplinary research initiatives in local, national, and international arenas.
- Build and maintain data driven information retrieval models, experiments, recommendation algorithms, and machine learning models for advanced signal processing.
- Mentor and advise team members on how to solve analytical, data and technical challenges.
- Have an active and supportive approach to inter-disciplinary and multi-disciplinary research that will help to foster interactions and links both within the Institute, University, and externally.
- Together with the Group Leader, support a reputable internationally recognised program of research capable of attracting external funding and research staff.

- Build strategic alliances to attract funding and identify collaborative opportunities with government and industry.
- Supervise research students both at undergraduate and postgraduate levels as well postdoctoral research fellows.
- Create significant new knowledge in the discipline and disseminate it through publication in highly ranked peer reviewed journals that will enhance the reputation of the Institute and the University at a national and international level.

Service and Engagement

- Make an outstanding contribution to the governance and collegial life within the Institute, across the University and more broadly outside the Institution including providing leadership in the Institute's governance.
- Work within the legislative requirements of the Institute and University and promote its commitment to inclusion and diversity.
- Represent and promote the Perkins and UWA through significant involvement in professional associations, conferences, non-academic (eg: government, not-for-profit, industry) partnerships, and other external activities.
- Provide leadership and participate in community affairs to enhance the standing of the Institute and University regionally, nationally, and internationally.
- Contribute to the Institute's talent management agenda through effective mentoring, coaching, supervision, and performance management.
- Undertake administrative duties as required in relation to the above research supervision.
- Perform other reasonable duties as directed by the Group Leader and Head of School.

Your specific work capabilities (selection criteria)

Qualifications and / or certifications

- PhD in an academic field relevant to the discipline or other higher professional qualifications appropriate to their discipline.

Research

- An outstanding demonstrable track record in excellence in research at a national and international level and a sustained record of high-quality outcomes based on a national or international research program.
- Demonstrated capacity to foster a collegiate research environment that promotes successful and on-time completion of HDR students.
- Demonstrated capacity and willingness to mentor junior and mid-career staff in the discipline.
- Demonstrated capacity to support researcher driven and demand driven research from competitive grant sources, industry government, charities and/or philanthropic sources.

Service/ Engagement

- Significant demonstrable experience of leading public engagement activities that promote research leadership and/or education outcomes, government, and industry.
- Demonstrated ability to relate well to staff and students at all levels and evidence of a commitment to equity and diversity principles.
- Demonstrated ability to positively lead team, school and wider University activities such as team and school meetings, strategic planning and program development.

Position-specific capabilities

- Familiarity with machine learning and computational analysis techniques, including feature extraction methodologies such as deep learning, transformer-based models, graph neural networks or related approaches for biological data analysis.
- Demonstrated experience with programming and data science environments including Python, R, Jupyter Notebooks and relevant machine learning frameworks. Experience with PyTorch React, and Hugging Face ecosystem is preferred.
- Knowledge of image analysis, bioinformatics, spatial biology, genomics, transcriptomics, or related biomedical datasets, with the ability to apply computational methods to research problems.
- Ability to contribute to the analysis of complex multidimensional datasets and support the development of computational workflows in a collaborative research environment.

Special requirements (selection criteria)

There are no special requirements.

Compliance

Ensure you are aware of and comply with legislation and University policies.
To learn more about the Code of Conduct, see Code of Conduct.
To learn more about Diversity, Equity and Inclusion, see Diversity, Equity and Inclusion.
To learn more about Safety, Health and Wellbeing, see Safety, Health and Wellbeing.