

# POST-DOCTORAL FELLOWSHIPS IN CARDIOVASCULAR SCIENCE

Sydney, Australia

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The Heart Research Institute (HRI) is a preeminent independent Medical Research Institute focused on understanding the causes and mechanisms of cardiovascular disease to apply this knowledge and provide better prevention and treatment. HRI produces world class research in close collaboration with local health authorities, hospitals, and universities as well as with its wide range of international collaborators.

To continue producing cutting edge, innovative and world-leading cardiovascular research, HRI recognises the need to attract and support talented younger scientists from diverse backgrounds and countries. To achieve this, HRI is offering fellowships for early career researchers. The Fellowships are initially for a period of 2 years to work under the mentorship of senior HRI scientists, with potential to lead to an independent research program, dependant on progression.

Due to the nature of the funding arrangement, the positions are open only to people currently or recently working in the UK at a UK cardiovascular research unit and currently not residing in Australia. It is anticipated that the fellowships will commence in early 2026. HRI will offer visa support, relocation assistance, and assistance with the cost of temporary accommodation upon arrival in Sydney. The appointments may be worked as either two years in Sydney, or one year in Sydney and one year in a collaborating institute in the UK.

This program is aimed at ambitious early career researchers and seeks to identify individuals with demonstrated creativity and an impressive CV. Successful applicants will have up to 3 years post-doctoral experience. Candidates will be selected for interview by a panel of senior discovery and clinical scientists.

Applicant's work and proposed project should ideally synergise with one HRI's key areas of interest, as outlined below. Applicants must have identified an HRI lab they wish to work with and must have secured the support of the relevant Lab Head and discussed a research plan/project. Further information on the research of each lab can be found at [Research and Medical Science • Heart Research Institute](#)

## Current labs seeking a Post-Doctoral Fellow include:

Using cutting-edge technologies, the **Vascular Complications Lab** investigates the pathogenesis of blood vessel diseases, including atherosclerosis – the underlying cause of coronary, carotid, and peripheral artery disease (PAD). As part of the Centre for PAD, the lab combines advanced cellular, molecular, and translational approaches to develop targeted therapies that protect vascular health to improve patient outcomes. **Contact:** A/Prof Mary Kavurma [mary.kavurma@hri.org.au](mailto:mary.kavurma@hri.org.au)

The **Atherosclerosis and Vascular Remodelling Lab** is exploring the pathogenesis of atherosclerosis through advanced cardiovascular genetics and transcriptomics, in collaboration with leading international researchers. **Contact:** Dr Ashish Misra [ashish.misra@hri.org.au](mailto:ashish.misra@hri.org.au)

The **Cardiovascular Regeneration Lab** is studying the complex pathophysiology of the cardiac microenvironment using state-of-the-art technologies, including personalised stem cells and 3D bioprinters. **Contact:** A/Prof Carmine Gentile [carmine.gentile@hri.org.au](mailto:carmine.gentile@hri.org.au)

The **Microvascular Research Lab** is focused on understanding the role of reactive species in small artery signalling and disease, following their recent landmark publications (Nature 2019; 566: p548, Nat Commun 2021; 12: p6626) **Contact:** Dr Christopher Stanley [christopher.stanley@hri.org.au](mailto:christopher.stanley@hri.org.au)

The **Cardiovascular Protective Signalling and Drug Discovery Lab's** research combines bioinformatics, natural product synthesis, and protein engineering to

develop novel therapies targeting patient-derived blood cells (See *ACS Central Science* 2024, 10, 344; 10k+ views). **Contact:** Dr Xuyu Liu [xuyu.liu@hri.org.au](mailto:xuyu.liu@hri.org.au)

The **Heart Muscle Lab** is focussed on understanding mechanisms underlying adaptive versus maladaptive heart enlargement (cardiac hypertrophy), heart failure, atrial fibrillation, cardio-oncology, organ cross-talk and sex differences. By using lab models and human samples we aim to identify new biomarkers and develop new therapeutic approaches. **Contact:** Prof Julie McMullen [julie.mcmullen@hri.org.au](mailto:julie.mcmullen@hri.org.au)

The **Cardiovascular Immunotherapy Unit** investigates how immune dysregulation drives the development and progression of cardiovascular diseases – particularly atherosclerosis and vascular inflammation – with the goal of developing novel immunotherapeutic strategies to treat coronary and peripheral artery disease. **Contact:** Dr Sian Cartland [sian.cartland@hri.org.au](mailto:sian.cartland@hri.org.au)

The **Cardiometabolic Lipidology and Lipidomics Lab** is dedicated to decoding how lipids (fats) contribute to vascular diseases, using state-of-the-art technologies, including machine learning-powered quantitative and spatial lipidomics. Related experience is required. **Contact:** A/Prof Jacob Qi [jacob.qi@hri.org.au](mailto:jacob.qi@hri.org.au)

## Applications

Applications close on 1 September 2025 and should be addressed to Professor Mathew Vadas and sent to [careers@hri.org.au](mailto:careers@hri.org.au)

Applications should contain:

(a) A structured CV outlining:

- educational and research experience
- research techniques mastered
- all research publications – for all those where the applicant is cited as first or

senior author, add a 100-word explanation of the importance of the paper. For all other papers, please include a one-sentence statement of the applicant's role in the paper

(b) A cover letter including:

- a 1–2 page outline of an innovative project the applicant would be interested in pursuing and what the applicant can bring to HRI
- the applicant's reasons for wanting to work at HRI
- an outline of the applicant's career ambitions

## Eligibility

- Applicants must be able to demonstrate current or recent employment in cardiovascular research in the UK
- This is a Category A position according to the NSW Health Policy – Occupational Assessment, Screening Vaccination Against Specified Infectious Diseases. The successful applicant will be required to provide evidence of protection against the infectious diseases specified, at their own cost, prior to appointment

## We offer:

- State-of-the art scientific facilities
- An excellent location in the heart of Newtown, a vibrant city area, close to the University of Sydney and the Royal Prince Alfred Hospital
- A competitive salary depending on experience, plus not-for-profit salary packaging benefits
- A friendly, flexible, and productive team environment
- Further benefits of working at HRI can be found our Benefits page: <https://www.hri.org.au/join-us/benefits>

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The Heart Research Institute supports Equal Employment Opportunity.

We value diversity and encourage applications from women, Aboriginal and Torres Strait Islanders, Māori and Pasifika peoples, people with disability, LGBTQI individuals and applicants of diverse cultures and ages.

We are committed to the safety and wellbeing of our employees and affiliates, and our community. Whoever you are, you are welcome at HRI.

[www.hri.org.au](http://www.hri.org.au)