Sydney Cardiovascular Fellowships 2020

Heart Research Institute and Charles Perkins Centre, The University of Sydney
The Heart Research Institute, the Charles Perkins Centre of The University of Sydney, and Camperdown/Royal Prince Alfred Hospital cardiovascular grouping are seeking exceptional national and international early to mid-career researchers with the potential to become global leaders in cardiovascular research for the Sydney Cardiovascular Fellowships 2020.

These fellowships represent the most prestigious fellowships in Australia for cardiovascular researchers, and are valued at $1,000,000 over a period of five years. For truly exceptional mid-career or later research leaders, we will negotiate an appropriately attractive package (up to $2,000,000 over five years).

Sydney Cardiovascular Research Consortium

The Heart Research Centre (HRI) and the Charles Perkins Centre (CPC) of The University of Sydney have joined with the Sydney Local Health District and affiliated research centres (such as the Centenary and George Institutes and NHMRC Clinical Trial Centre) to form the Sydney Cardiovascular Research Consortium at Camperdown.

As part of Sydney Research we are at the forefront of innovative research to prevent, detect, and treat the world’s number one killer.

Together, we represent the largest consortium of cardiovascular researchers in Australia.

Our world-leading research spans all facets of cardiovascular research, with particular strength in biomedical and clinical research and trials.

Some of our key researchers include:

- Professor Shaun Jackson
- Professor David Celermajer
- Professor Chris Semsarian
- Professor David James
- Professor Stephen Simpson
- Professor Philip Hogg

More information on these researchers and their areas of expertise can be found at http://scvrc.org.au.

Charles Perkins Centre

The Charles Perkins Centre is the result of a $500 million initiative at The University of Sydney, which aims to ease the burden of obesity, diabetes and cardiovascular disease, and their related conditions using a multidisciplinary approach. This represents one of the largest single investments in diabetes, obesity and cardiovascular research globally.

The CPC is based in the new Research and Education Hub at The University of Sydney and has capacity for 900 wet and dry laboratory researchers. HRI has a number of its labs based on the third floor of the Hub.

Facilities include seven fully serviced communal OGTR-approved PC2 laboratories, supported by a laboratory management team.

Each lab houses 80 to 100 researchers and is equipped with the latest cellular and molecular biological instrumentation, including real time qPCR machines, tissue culture facilities, CO2 and hypoxic incubators, ultra- and super-speed centrifuges, freezers, cold rooms and a biobanking facility, including the unique resource the Sydney Heart Bank, protein expression, separation and identification equipment including LC, electrophoresis, imaging and microscopy.

The Hub houses The University of Sydney’s core research facilities for phenotyping, cellular imaging, flow cytometry, mass spectroscopy and preclinical imaging.
Heart Research Institute, Eliza St

The Newtown campus of HRI is a purpose-built three-storey facility conveniently located near Newtown railway station, and is a pleasant 10 to 15 minute walk from its affiliated institutions, The University of Sydney and Royal Prince Alfred Hospital.

The laboratory facilities spread over two floors are OGTR and Department of Agriculture-approved PC1/BC1 and PC2/BC2, with capacity for over 100 researchers and their specialised equipment. A large light-filled open-plan office area and terrace encourages collaboration, as do a variety of meeting rooms and seminar room with modern technology and IT support.

Scientific facilities available onsite include staff-supported tissue culture and histology facilities, comprehensive microscopy facilities (brightfield, fluorescence and confocal, including live cell imaging and automated brightfield/fluorescence slide scanning), real time qPCR machines, flow cytometry, centrifuges and ultracentrifuges, GC/MS, EPR spectroscopy, radiation facilities, warm room, cold rooms and ultra-low temperature freezer storage. The comprehensive animal facilities include mouse breeding, and mouse and rat housing and surgery, along with a variety of neuroscience and imaging capabilities (ultrasound, IVIS, laser doppler). HRI researchers also have access to The University of Sydney Core Research Facilities if additional specialised instrumentation or support is required.

Eligibility and selection criteria

The successful applicant will have a primary focus on basic biomedical cardiovascular research. Areas of particular interest include:

- Cardiovascular links with COVID-19
- Atherosclerosis and its complications
- Vascular biology and thrombosis
- Cardiometabolic disease
- Heart failure with preserved ejection fraction in diabetes and obesity
- Cardiovascular tissue engineering and biomaterials
- Cardiovascular genetics and sudden cardiac death
- Thromboembolic diseases in diabetes and cancer
- Medical chemistry/Chemical biology

Applicants performing research in these or complementary areas will be considered.
Selection criteria will focus on the following:

• Success in grant applications
• Awards and Distinctions
• Strategic fit with HRI and CPC mission
• Strong references from world-renowned laboratory
• Highly competitive metrics, with comparison to an appropriate international peer group. Likely to be competitive for NHMRC, Heart Foundation, ARC, and NSW State Cardiovascular Capacity-Building Grant schemes.

NSW Cardiovascular Capacity-Building Grants

In 2018 the NSW Government announced its commitment to reduce the health impact of cardiovascular disease by establishing a special scheme to build capacity in cardiovascular research in the state by spending $150,000,000 over 10 years. In the first two years, over $30M in grants has been awarded. One of the aims is attracting the best researchers from around Australia and overseas to do research in this state. No other similar scheme is available elsewhere in Australia. An important criterion for selection of applications will be competitiveness for an award in this scheme.

The Fellowship

The Sydney Cardiovascular Fellowship 2020 will include:

• a one-line Fellowship grant AUD $1,000,000 over five years (for truly exceptional mid-career or later research leaders, an attractive package of up to $2,000,000 over five years may be negotiated)
• employment through HRI and a conjoint appointment with The University of Sydney
• workspace in either the Eliza St HRI campus or the Charles Perkins Centre Hub at The University of Sydney
• access to both Eliza St and CPC facilities
• state-of-the-art laboratory facilities
• administrative support
• appropriate visa support for international applicants
• opportunity to collaborate with world-leading academic cardiovascular expertise.

Expected outcomes

It is expected that the successful applicant will be able to commence their Fellowship in 2021. It is anticipated that the successful applicant will be able to establish an independent program of research that is complementary to existing research within HRI and CPC, The University of Sydney, and Sydney Cardiovascular Research Consortium at Camperdown.

Application process

Applicants should submit an application addressing the selection criteria that includes:

• a covering letter with full name, title, qualifications and contact details
• statement of research intent, and how it aligns with HRI and CPC missions
• a CV or resume listing grant success, publications, awards and metrics (H index, citations, journal ranking)
• statement of proposed research (no more than 1000 words)
• three to five supporting references from existing or previous research supervisors and/or mentors,
• a statement of commitment to the Fellowship for five years.

Please note: all final applications should be presented as a collated PDF.

Applications can be submitted electronically to careers@hri.org.au.

Applications must be received by 11:30pm, 13 July 2020 (Sydney time). Notification of receipt of application will be provided.

Applications will be reviewed by the Heart Research Institute and Charles Perkins Centre Cardiovascular Academic Recruitment Committee, and a shortlist will be selected.

Shortlisted applicants will be notified by approximately mid August 2020. The first round of interviews will be conducted in late August 2020.

Selected applicants will be invited to attend an interview at the Charles Perkins Centre Research and Education Hub, The University of Sydney, in September 2020. Interviews will be by videoconference or in person, depending on travel advice related to COVID-19 at the time. If face-to-face, airfare and accommodation will be provided for each applicant.

It is anticipated that the successful applicant will be able to commence their Fellowship in 2021.

For more information about this prestigious opportunity, please email careers@hri.org.au. Your enquiry will be triaged and forwarded to the appropriate person to assist you.
Dr Anna Waterhouse is recipient of a 2016 Sydney Cardiovascular Fellowship and is Leader of the Cardiovascular Medical Devices Group at HRI. Dr Waterhouse received her PhD from The University of Sydney and did her post-doctoral training at the Wyss Institute for Biologically Inspired Engineering at Harvard Medical School. Her research focuses on understanding the interactions of medical devices with patients’ blood, proteins and cells to develop more sophisticated and biocompatible materials for medical devices for the diagnosis and treatment of cardiovascular disease.

“This Fellowship allows me to come to a multidisciplinary research environment, being associated with HRI and the University and RPA Hospital. The strong link with the hospital is very valuable for our research, allowing us to establish strong collaboration with the clinicians and other group leaders at HRI to do great translational research.”

Dr Waterhouse has been successful in receiving an Australian Research Council (ARC)/Linkage Projects (LP), Vanguard Heart Foundation grant and Robinson USYD Fellowship in 2019.

Associate Professor John O’Sullivan is recipient of a 2016 Sydney Cardiovascular Fellowship, a Clinical-Academic Cardiologist at HRI, USYD and the RPA Hospital, and Leader of the Cardiometabolic Disease Group at HRI. He was awarded an overseas training fellowship by the Irish Cardiac Society in 2012 to train at Massachusetts General Hospital and Harvard Medical School. His research focuses on the cardiovascular effects of obesity-driven metabolic diseases through a multi-omics approach to phenotype patient cohorts and uncover novel markers, effectors, and predictors of disease.

“From abroad, I was attracted to Sydney by the multidisciplinary metabolic focus of CPC and HRI. This Fellowship offers me opportunities to collaborate with many of the researchers experts at CPC/HRI. They have been invaluable in piecing together the primary puzzle for my research: the link between metabolic disease and cardiovascular disease, particularly heart failure.”

Associate Professor O’Sullivan has been successful in receiving a Janssen Research & Development, LLC (USA)/Research Grant and a Clinician Scientist NSW Cardiovascular Health Grant in 2019.

Dr Freda Passam is recipient of a 2017 Sydney Cardiovascular Fellowship and is Leader of the Cardiovascular-protective Signalling and Drug Discovery Group at HRI/CPC. Her postdoctoral research was on the pathophysiology of the antiphospholipid syndrome at the University of New South Wales, followed by studies on animal models of thrombosis and thiol isomerase inhibitors at Harvard University, Boston, USA. Her research focuses on studying new mechanisms of thrombosis to guide the development of anti-thrombotics and developing biochips for the diagnosis of thrombotic and bleeding tendency in patients.

“The Fellowship offers an already established collaborative network between the CPC, HRI and RPA Hospital, which is the ideal consortium to support great research and grant applications.”

Dr Passam has been successful in receiving an ECMR NSW Cardiovascular Health Grant in 2020.

Dr Ashish Misra is recipient of a 2017 Sydney Cardiovascular Fellowship and Leader of the Atherosclerosis and Vascular Remodelling Group at HRI. He received his PhD in cell and molecular biology from Nanyang Technological University, Singapore in 2011. He did his post-doctoral training at Yale Cardiovascular Research Center as recipient of the prestigious Yale Brown-Cox Postdoctoral Fellowship. His main objective is to broaden understanding of the cellular and molecular mechanisms involved in blood vessel wall patterning, define the role of these pathways in vascular abnormalities and complications, and link these insights to translational research to improve the prevention and treatment of human cardiovascular disease.

“I found it very fascinating to work at HRI, a research institute having established research collaboration with USYD and RPA Hospital, and to work with CPC/HRI leaders who are leading scientists in their disciplines.”

Dr Xuyu Liu is recipient of a 2019 Sydney Cardiovascular Fellowship and Leader of the Cardiovascular-protective Signalling and Drug Discovery Group at HRI. He received his PhD from The University of Sydney in 2017 and moved on to Cornell University, USA, and later to Swiss Federal Institute of Technology Lausanne (EPFL) in Switzerland for post-doctoral research in the field of chemical proteomics. His research aims to decipher the chemical genetics underpinning the cardiovascular-protective mechanisms of natural supplements and kinase inhibitors to facilitate efficient drug repositioning for cardiovascular disease.

“The Fellowship and the multidisciplinary research environment at HRI enable me to establish a unique research team working at the interface between chemistry, cell biology and in vivo modelling and imaging.”

Dr Liu has been successful in receiving a Sydney Catalyst grant.