Laboratory Head, Bioinformatics

Victor Chang Cardiac Research Institute

Information for prospective candidates
About Us

The Victor Chang Cardiac Research Institute is one of the most respected heart research facilities in the world and is dedicated to finding cures for cardiovascular disease. Renowned for the quality of its breakthroughs, the Victor Chang Institute uses innovative transplantation techniques, and conducts complex molecular and genetic analysis to make world class discoveries.

A global centre-of-excellence, it integrates advanced stem cell research, regenerative medicine, and bio-engineering using cutting edge technology. Our scientists rapidly translate our discoveries into new diagnostics, preventions and treatments of cardiovascular disease – reducing the incidence, severity and impact of heart disease.

Our Mission

The relief of pain and suffering, and the promotion of wellbeing, through an understanding of the fundamental mechanisms of cardiovascular biology in health and disease.

Our Values

- **Passion:** To encourage and share the excitement of scientific discovery
- **Courage:** To have the courage to pursue research that will enable us to imagine the unimaginable
- **Integrity:** To act with honesty and fairness at all times
- **Curiosity:** To create an environment that encourages and feeds curiosity
- **Teamwork:** To promote collegiality
- **Respect:** To respect the individual and their unique and diverse contributions
Key Research Themes & Areas

- Bioinformatics
- Biophysics
- Cardiac imaging
- Congenital heart disease
- Developmental & stem cell biology
- Electrophysiology
- Genomics & precision medicine
- Heart failure & cardiomyopathy
- Heart transplantation
- Ischemic heart disease
- Metabolomics
- Structural biology
- Vascular biology

Our Strategic Goals

1. Undertake innovative and cutting edge research that provides fundamental insight into biology and improves understanding, prevention, diagnosis and treatment of cardiovascular disease

2. Enhance the impact of our research on cardiovascular health by translating our discoveries and commercialising them where possible

3. Educate and train the next generation of leaders in cardiovascular biology, medicine and research

4. Build a sustainable organisation that provides the necessary infrastructure and an ongoing funding base to support our recruitment activities and research agenda

5. Attract, support and nurture high calibre staff by providing them with the tools, infrastructure and environment needed to do world class research

6. Raise public awareness of our research activity and engage with our community and stakeholders so that we receive the support we need to undertake our work

Leadership

Executive Director
Professor Robert Graham, AO
FAA, MBBS, MD, FRACP, FACP, FAHA, FCSANZ, FAHMS

Deputy Director
Professor Richard Harvey, AM
FAA, FAHMS, FRS

Deputy Director
Professor Jamie Vandenberg
FHRS, FAHMS
Governance

The Institute is an independent research facility with its own Board of Directors and is a member of St Vincent's Health Australia. In addition, the Institute is affiliated with the University of New South Wales, is accredited by the National Health and Medical Research Council (NH&MRC) Australia as an independent biomedical research facility, and is a member of the Association of Australian Medical Research Institutes (AAMRI).

The business of the Institute is governed by the Board, which is responsible for the oversight of policies, strategic directions and management of the Institute. In turn, the Board delegates to the Institute’s Executive Director the overall responsibility for the scientific program and management of the Institute. Board members are leaders in business, the professions and academia.

The Institute’s research staff and students are assigned to theme-based research divisions, but collaborations across the Institute are fostered and encouraged. Researchers are supported by professional services and fund raising staff.

Our Five Research Divisions

1. Cardiac Physiology and Transplantation
   Division Head: Professor Peter MacDonald

2. Developmental and Stem Cell Biology
   Division Head: Professor Richard Harvey

3. Molecular Cardiology and Biophysics
   Division Head: Professor Bob Graham

4. Molecular, Structural and Computational Biology
   Acting Division Head: Dr Joshua Ho

5. Vascular Biology
   Division Head: Professor Roland Stocker
Financial Overview 2017

FINANCIAL SUMMARY FOR 2017

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Income for operations</td>
<td>$17,714,469</td>
</tr>
<tr>
<td>Expenditure in operations</td>
<td>$21,978,292</td>
</tr>
<tr>
<td>(Deficit) before non-operating income</td>
<td>($4,263,823)</td>
</tr>
<tr>
<td>Unrealised gain/(loss) on investment revaluation to market</td>
<td>$987,705</td>
</tr>
<tr>
<td>Deficit for the year</td>
<td>($3,276,118)</td>
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</tbody>
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The above is an extract from the 2016 audited Financial Statements. The extract does not include the information normally included in the financial statement. Accordingly, this extract is to be read in conjunction with the audited Financial Statements for the year ended 31 December 2016.
Bioinformatics & computational genomics research in VCCRI

At VCCRI, we have a rapidly growing reputation for our high quality bioinformatics research. We currently have two independent laboratories that focus on bioinformatics research, led by Faculty members Dr Joshua Ho and Dr Eleni Giannoulatou. We also have a Genomic Core facility that provides basic bioinformatics service to the institute.

The **Bioinformatics and Systems Medicine Laboratory** is led by Dr Joshua Ho. The laboratory specialises in single-cell RNA-seq data analysis, ChIP-seq data analysis, cloud computing, machine learning, bioinformatics software quality assurance, and systems biology.

The **Computational Genomics Laboratory** is led by Dr Eleni Giannoulatou. The laboratory focuses on the development and application of statistical methods to answer complex genetic questions using high-throughput genomics data. Using the latest next-generation sequencing technologies, her team develops quantitively approaches to identify disease-causing DNA mutations, and aims to understand the emergence of de novo mutations in the human genome.

The Institute also has a dedicated **Genomic Core** facility to provide basic genomic and bioinformatics services. This facility is managed by Dr David Humphreys, who has strong expertise in bioinformatics RNA-seq data analysis, whole genome sequencing analysis, and genome annotation.

Some bioinformaticians at VCCRI, including Dr Eleni Giannoulatou (front left; Head, Computational Genomics Laboratory), Dr Joshua Ho (front middle; Head, Bioinformatics and Systems Medicine Laboratory), and Dr David Humphreys (back middle; Manager, Genomics Core).
Selected Recent Publication Highlights


Key Selection Criteria

Essential Criteria:

- a PhD in the fields of bioinformatics, computational biology, statistical genetics or related fields
- Relevant postdoctoral research experience
- a strong publication record in leading high-impact international journals
- capability to drive the strategic development of new research initiatives
- an overall upward trajectory in research productivity and impact
- a strong potential to attract competitive research funds
- a strong potential to lead and manage a successful research program
- strong experience in team building, leadership and mentoring staff and students
- Demonstrated experience in collaboration with biomedical researchers
- excellent communication skills

The successful candidate will be expected to achieve outcomes that contribute significantly to our understanding of cardiovascular biology at the molecular level.
Benefits & Conditions of employment

The Victor Chang Institute is ideally situated in Darlinghurst, an inner-city suburb only five minutes from Sydney’s CBD and forms part of the St Vincent’s Healthcare Campus.

We strive to ensure our staff and students enjoy a great working environment. We value and are committed to providing a working environment that embraces diversity and gender equity and promotes flexible working arrangements for staff to balance working requirements and personal needs.

Terms of Appointment
The Laboratory Head is appointed by the Institute for a period of five years, renewable and is accountable to the Executive Director.

Salary
The successful candidate will be offered an attractive remuneration package commensurate with the responsibilities of the position and the candidates skills, experience and qualifications.

Salary packaging options are also available to all staff at the Institute.

Research Budget
A research budget will be provided to the successful candidate to help support their research activities however it is expected that the candidate will enhance this internal resource through substantial national and international external funding.

A competitive start up package will be part of an offer of appointment

Relocation
Where the successful candidate is required to move to Sydney from their current place of residence, the Institute will assist with a reasonable relocation assistance package.

Visa sponsorship will be available if required.
HOW TO APPLY

Expressions of interest, which should address the key selection criteria, and include a comprehensive curriculum vitae, an outline of your current and future research plans and contact details of three referee’s should be sent to: Maria Voukenas, Head Human Resources at m.voukenas@victorchang.edu.au

CONTACT DETAILS

Ms Maria Voukenas  
Head, Human Resources  
Victor Chang Cardiac Research Institute  
405 Liverpool Street, Darlinghurst, NSW, 2010  
Australia

Email: m.voukenas@victorchang.edu.au

CLOSING DATE: 15 August 2018