OPERATIONAL INFRASTRUCTURE SUPPORT PROGRAM 2019–2020
Highlights from 12 Victorian Independent medical research institutes

2021 Report

Association of Australian Medical Research Institutes
Victoria’s independent medical research institutes are not only fundamental to the state’s reputation as a global leader in medical research, we play a vital part in Victoria’s health care system and economy.

This has been, and continues to be, especially apparent with the COVID-19 pandemic. Our vibrant medical research institute sector in collaboration and partnership with universities, hospitals, and industry, continue to understand, prevent, and develop better detection and treatment methods not only against COVID-19 but a vast array of diseases.

Ongoing funding such as that from the Victorian Government’s Operational Infrastructure Support (OIS) Program is essential to our continued success. A 2021 report commissioned by Victoria’s Lead Scientist, Dr Amanda Caples, has demonstrated the stunning economic returns from investment in medical research. The OIS Program in particular drove $2 billion in new revenue and created over 15,000 new jobs between 2000–2001 and 2016–2017.

These programs ensure that we are ready and able to respond rapidly, both in our ongoing research and in the event of a crisis. They are critical in enabling our medical research institutes to deliver life-changing health outcomes to our community in Victoria and more widely.

Professor Brendan Crabb AC,
Chair Victorian chapter,
Association of Australian Medical Research Institutes (VicAAMRI)
Director and CEO Burnet Institute


Cover images clockwise from top left: National Ageing Research Institute; Burnet Institute; Institute for Breathing and Sleep; Visualisation of SARS-CoV-2 virus with nanobodies (purple) attaching to the virus ‘spike’ protein | Dr Drew Berry in collaboration with Associate Professor Wai-Hong Tham, WEHI; Centre for Eye Research Australia; St Vincent’s Institute of Medical Research.

Baker Heart and Diabetes Institute
Diagnosis, prevention and treatment of diabetes and cardiovascular disease.

Bionics Institute
Developing innovative medical devices and therapies to improve lives for people with conditions including: hearing loss, epilepsy, Parkinson’s disease, Crohn’s disease, diabetes and stroke.

Burnet Institute
To achieve better health for vulnerable communities by accelerating the translation of research, discovery and evidence into sustainable health solutions.

Centre for Eye Research Australia
To save and restore sight by working to understand the causes of eye disease, to inform disease prevention and to improve the diagnosis and treatment of disease.

The Florey Institute of Neuroscience and Mental Health
Finding cures for common neurological conditions such as multiple sclerosis, stroke, and neurodegenerative diseases.

Hudson Institute of Medical Research
Delivering better health outcomes for cancer, inflammation, reproduction, and development by taking laboratory discoveries through to the clinic as new diagnostics, treatments, and cures.
In 2019–2020, $34.5M was provided by the Victorian Government to 12 Victorian independent medical research institutes through the OIS program. This Program funds services and infrastructure that directly support research activities which are not covered by research grants, including but not limited to facilities, IT services, research management, research commercialisation and translation costs. OIS funding provided by the Victorian Government enables medical research institutes to support these research-critical activities, which contribute directly to the delivery of outstanding health outcomes.

This report has been commissioned by the Department of Jobs, Precincts and Regions and has been prepared by the Association of Australian Medical Research Institutes (AAMRI). The report highlights the outstanding achievements of Victoria’s medical research institutes, and the important role played by the OIS program in building a world-class medical research sector.

ABOUT THE OPERATIONAL INFRASTRUCTURE SUPPORT (OIS) PROGRAM

- **Institute for Breathing and Sleep**: Improving quality of life for people with respiratory and sleep disorders, through research and education.
- **Murdoch Children’s Research Institute**: To prevent and treat childhood conditions, working in five key areas: infection and immunity, stem cell medicine, clinical translation, genomics, and population health.
- **National Ageing Research Institute**: To improve the life and health of older people through research and evidence-based practice.
- **Olivia Newton-John Cancer Research Institute**: Cancer research focussed on the clinical targeting of cancer for more effective treatments.
- **St Vincent’s Institute of Medical Research**: Cause, prevention, and treatment of common, serious diseases including diabetes, obesity, heart disease, cancer, bone diseases and Alzheimer’s.
- **WEHI (formerly the Walter and Eliza Hall Institute of Medical Research)**: We are where the world’s brightest minds collaborate and innovate to make discoveries that will help us all live healthier for longer.
COVID-19 AND MEDICAL RESEARCH INSTITUTES IN AUSTRALIA

COVID-19 was first identified in December 2019 in Wuhan, China, as a pneumonia-like condition. It was later identified as a novel coronavirus named SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2). Despite considerable efforts to contain the spread of the virus, COVID-19 was declared a pandemic by the World Health Organization on 11 March 2020. The COVID-19 pandemic continues to break daily records, with more than 151 million confirmed cases and 3 million deaths attributed to the pandemic thus far. Even as the global vaccination pace is accelerating, multiple new variants of the SARS-CoV-2 virus are now circulating globally, further complicating the fight against the pandemic.

This report is being compiled and written slightly more than a year into the pandemic and the independent medical research institutes in Victoria, along with the rest of the community, have stepped up to the COVID-normal way of operating. Medical research institutes, and the research and development sector in general, continue to be critical in the global efforts to save lives, by working to better understand the virus, developing diagnostics, antiviral treatments and vaccines, as well as contributing to public health policies. Melbourne-based CSL-Seqirus now has the capability to manufacture and supply the TGA-approved AstraZeneca COVID-19 Vaccine (ChAdOx1-S). The Victorian Government’s $50 million commitment to help establish an mRNA vaccine and therapeutic manufacturing site will also significantly boost sovereign manufacturing capability in Australia to bolster onshore vaccine production capabilities.

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2 https://covid19.who.int/
Victorian Independent Medical Research Institutes continues to be key to the Australian and global response to the COVID-19. Their research includes:

**Baker Heart and Diabetes Institute**
- Supercomputing for testing key proteins
- PREDICT – examining complications in patients with type 2 diabetes
- Breathlessness in patients who have recovered from COVID infection
- PERCEIVE – investigating persistent cardiovascular effects of COVID-19

**Burnet Institute**
- Supporting vaccine development with antibody assays
- Understanding social and economic impacts of restriction and prevention measures
- Documenting maternity health response
- Testing antiviral drugs
- Exploring potential immunotherapies through monoclonal antibodies
- Developing rapid diagnostic tests

**Hudson Institute of Medical Research**
- Anti-inflammatory cancer drug in clinical trials for severe COVID-19
- Development and repurposing of drugs for severe lung inflammation
- Testing of cell therapies for COVID-19 acute respiratory distress
- Understanding the defects in interferon signalling that predispose to severe SARS-CoV-2 infection

**Murdoch Children’s Research Institute**
- Stem cell-derived human tissues and organs to better understand COVID-19 pathology
- Leveraging existing longitudinal cohorts to investigate the immune differences in children
- BRACE trial of BCG vaccine in healthcare workers
- Examining the health and socio-economic effects on vulnerable children and families
- Contributing to the First Few X study, identifying immune factors in children
- Leveraging the rollout of the Generation Victoria [GenV] study to monitor and improve the ongoing health of children conceived and born during the ‘COVID-19 era’

**St Vincent’s Institute of Medical Research**
- Evaluation of COVID diagnostics
- Developed COVID quality assurance programs for pathology laboratories
- Provided technical advice, support and staff training on COVID testing for a major Melbourne hospital network
- Co-developed national standards for Australia’s COVID testing regime
- Collaborative research with Burnet Institute and Doherty Institute has established laboratory assays for COVID antibody testing
- Modelled the expected load of COVID-19 patients for St Vincent’s Hospital Melbourne

**WEHI**
- Identified nanobodies that can effectively blocked the SARS-CoV-2 virus in pre-clinical models
- Studying immune responses to COVID-19 infection and vaccination through COVID PROFILE
- National Drug Discovery Centre high-throughput screening facility used to search for potential new therapies for COVID-19
- c-FIND: a new proposed rapid diagnostic tool for infectious diseases, including COVID-19
- Helping to monitor SARS-CoV-2 in wastewater through Victoria’s COVID response program and developing methods to detect and link variants in wastewater to clinical cases.

Main photo: Antibodies binding the SARS-CoV-2 virus. COVID-19 is caused by the SARS-CoV-2 virus. In this image, which is based on scientific data, antibodies – an important part of our immune defences – are shown in orange and purple, binding to ‘spike proteins’ on the surface of SARS-CoV-2 virus (shown in teal and yellow). Spike proteins are critical for SARS-CoV-2 to enter human cells, and this can be blocked by specific antibodies – breaking the infection cycle | Animation by Dr Drew Berry, WEHI.TV, WEHI
CASE STUDY

PUTTING CHILDREN FIRST: UNDERSTANDING THE IMPACT OF COVID-19 ON CHILDREN

‘Pivot’ may have been the most overused word of 2020 but it accurately captures how Murdoch Children’s Research Institute (MCRI) responded to the COVID-19 pandemic. The institute adapted its strengths in stem cell technology and existing large study cohorts, leveraged its government networks as well as its international research and philanthropic networks, to reassure families at a time of high anxiety. Their researchers, working alongside patients and families, played a world-leading role in making profound contributions to COVID-19 knowledge on the global stage.

A key question early in the pandemic was whether children would be vulnerable to COVID-19, as they are to seasonal respiratory infections. MCRI researchers first analysed hospital admission data to reassure the Australian public that children were less likely than adults to contract COVID-19.

They went on analyse immune system data from 50 children and 70 adults from 28 Melbourne households in one of the world’s most in-depth examinations of children’s immune system responses to COVID-19.

The immune responses in adults and children were monitored during the acute phase of infection and for two months afterwards. Researchers, led by MCRI’s Dr Melanie Neeland, found that children were likely protected from severe COVID-19 because their innate immune cells rapidly migrated to infection sites, stopping the virus in its tracks.

Dr Neeland said, “We observed kids who were infected, but were able to shut down the virus without even showing a positive test result. At a stage of the pandemic where so much was unknown, it was reassuring news for parents, carers and researchers alike.”

The research article was named in the top 50 Nature publications on COVID-19 and received significant public attention via television and online media.
KEY FIGURES FOR 2019–2020

Clockwise from top left: Burnet Institute; Bionics Institute; Florey Institute of Neuroscience and Mental Health; Hudson Institute of Medical Research
VICTORIA’S INDEPENDENT MEDICAL RESEARCH INSTITUTES ARE:

In 2019–20

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>At the cutting edge of medical research working in a broad range of health areas to deliver better health outcomes for everyone</td>
<td>629</td>
</tr>
<tr>
<td>Successful in attracting research funding from government, industry and philanthropic organisations</td>
<td>$250.3M</td>
</tr>
<tr>
<td>Highly collaborative locally, interstate and internationally across government, health, university and industry sectors</td>
<td>802</td>
</tr>
<tr>
<td>Engaging the community through public health education and community outreach events</td>
<td>165</td>
</tr>
<tr>
<td>Employers of a highly-skilled dynamic and diverse workforce including researchers, students, corporate and support staff with a wide range of skills</td>
<td>&gt;4500</td>
</tr>
</tbody>
</table>
### CLINICAL TRIALS

Below: Murdoch Children’s Research Institute  
Bottom: Dr Emily Eriksson and Dr Vanessa Bryant are leading the COVID-PROFILE study | WEHI

Main photo: Florey Institute of Neuroscience and Mental Health

<table>
<thead>
<tr>
<th>Therapeutic area</th>
<th>Trial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye disease</td>
<td>Trial of second-generation bionic eye</td>
</tr>
<tr>
<td>Child health</td>
<td>Evaluation of treatment for achondroplasia (a form of dwarfism) and movement disorders in infants and young children</td>
</tr>
<tr>
<td>Cancer</td>
<td>Studies into treatments for brain, prostate, and blood cancers</td>
</tr>
<tr>
<td>Healthy ageing</td>
<td>Investigating the effects of befriending in mental well being of aged care residents</td>
</tr>
<tr>
<td>Neuroscience</td>
<td>Treatments for Parkinson’s disease and stroke</td>
</tr>
</tbody>
</table>
CASE STUDY

OPTIMISE YOUR HEALTH

The physical activity research team at the Baker Heart and Diabetes Research Institute are global leaders in sedentary behaviour research.

Their work has shown that interrupting sitting with short, simple activity breaks – like getting those leg muscles moving – can help with blood glucose control and insulin levels.

Other evidence points to benefits for vascular health, including more effective functioning of the blood vessels and improved blood flow to the brain, and mental health.

The team is now recruiting Melbourne desk-based workers with type 2 diabetes into the OPTIMISE Trial, to track how reducing and breaking up sitting time benefits their glycaemic control. The twelve-month intervention component of the trial involves health-coaching, a complimentary sit-stand workstation and a physical activity tracker (Fitbit).

"Type 2 diabetes prevalence is particularly high among middle-aged and older workers. But for those who’ve returned to the office after a significant period working from home during the pandemic, it’s a great time to reset with healthy habits,” Professor David Dunstan says.

When 56-year-old IT worker, David Quinan developed type 2 diabetes, he knew he needed to make some changes.

David took part in the OPTIMISE trial last year and experienced weight loss of more than five kilos, his blood glucose dropped significantly, he lost centimetres off his waist and hips and he now clocks up an average 100,000 steps a week. What’s more – he feels great!

David’s long-term goal is to get off his medication and to manage his health through a balanced lifestyle. The OPTIMISE study has been an integral part of moving him towards achieving this goal.
**THE COMMERCIALISATION PIPELINE**

**VICTORIAN INDEPENDENT MEDICAL RESEARCH INSTITUTES ARE COMMERCIALISING AND TRANSLATING THEIR RESEARCH DISCOVERIES INTO REAL WORLD APPLICATIONS**

In 2019–20

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>KNOWLEDGE CREATION</strong></td>
<td>4,334</td>
<td>Peer-reviewed publications</td>
</tr>
<tr>
<td></td>
<td>1,842</td>
<td>Highly cited publications*</td>
</tr>
<tr>
<td><strong>PROTECTING INTELLECTUAL PROPERTY</strong></td>
<td>58</td>
<td>Patents awarded</td>
</tr>
<tr>
<td><strong>TECHNOLOGY TRANSFER</strong></td>
<td>629</td>
<td>Active clinical trials</td>
</tr>
<tr>
<td></td>
<td>133</td>
<td>Active licences, options and assignment agreements</td>
</tr>
<tr>
<td><strong>ESTABLISHING PARTNERSHIPS</strong></td>
<td>802</td>
<td>Contracts, collaborations and consultancies</td>
</tr>
<tr>
<td></td>
<td>$22m</td>
<td>Invested in independent medical research institutes for commercialising research innovations</td>
</tr>
<tr>
<td><strong>COMMERCIAL VALUE AND RETURNS</strong></td>
<td>$49m</td>
<td>In commercial income from licencing of medical research innovations</td>
</tr>
</tbody>
</table>

*publications from the last 10 years that have over 100 citations
SPIN-OUT COMPANIES

BUILT ON RESEARCH INNOVATIONS AT VICTORIAN MEDICAL RESEARCH INSTITUTES, THERE WERE 13 NEW SPIN-OUT COMPANIES IN 2017–2020.

The Bionics Institute of Australia established their spin-out Deep Brain Stimulation Technologies in 2019. Deep brain stimulation (DBS) is an established, technologically advanced treatment for movement disorders such as Parkinson’s disease, essential tremor and dystonia. It has an emerging role for the treatment of Epilepsy and Obsessive Compulsive Disorder. The spin-out aims to enhance the effectiveness of DBS by fine tuning existing therapies and exploring new brain targets and stimulation strategies.

LICENCING OF PATENTED TECHNOLOGIES

The licensing of technologies from medical research institutes to other institutions enable these technologies to be further developed into therapies that ultimately benefit human health. The commercial income received allows medical research institutes to fund new research projects and initiatives.

In 2019–20 Victorian independent medical research institutes had

133 active licences, options and assignment (LOA) agreements

63 LOAs generated income

$49.0m Total income from LOAs
# Partnerships - Collaborations, Contracts and Consultancies

*Victorian Independent Medical Research Institutes entered into partnership agreements across government, health, university and industry sectors.*

<table>
<thead>
<tr>
<th></th>
<th>State</th>
<th>Inter-state/National</th>
<th>International</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>343</td>
<td>201</td>
<td>258</td>
</tr>
</tbody>
</table>

**With at least one...**

<table>
<thead>
<tr>
<th>Partner Type</th>
<th>State Percentage</th>
<th>Inter-state/National Percentage</th>
<th>International Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Partner</td>
<td>4%</td>
<td>14%</td>
<td>4%</td>
</tr>
<tr>
<td>Commercial Partner</td>
<td>25%</td>
<td>16%</td>
<td>44%</td>
</tr>
<tr>
<td>University Partner</td>
<td>43%</td>
<td>39%</td>
<td>41%</td>
</tr>
<tr>
<td>Clinical or Health Partner</td>
<td>29%</td>
<td>32%</td>
<td>9%</td>
</tr>
<tr>
<td>Another MRI</td>
<td>12%</td>
<td>16%</td>
<td>10%</td>
</tr>
</tbody>
</table>
CASE STUDY

HUDSON-MONASH PAEDIATRIC PRECISION MEDICINE PROGRAM (HMPPMP): VITAL PARTNERSHIPS TO IMPROVE OUTCOMES FOR CHILDREN WITH CANCER

Every year about 1,000 children and adolescents in Australia are diagnosed with cancer and another 5,600 are on continued treatment. Any cancer diagnosis is heart-wrenching, for children it seems profoundly unfair.

Knowledge of genetic variability in paediatric cancer patients is building at a fast pace and, with it, the potential to advance treatments, survival rates and the quality-of-life for childhood cancer patients. However, this can only be realised through a coordinated effort in world-class research and a commitment to increased funding.

Led by Hudson Institute of Medical Research, the Hudson-Monash Paediatric Precision Medicine Program (HMPPMP) brings together Victoria’s leading childhood cancer researchers and clinicians to improve the outcomes for children with cancer and train the next generation of paediatric cancer scientists and clinicians.

Funded by the Children’s Cancer Foundation (CCF), HMPPMP’s collaborators are Monash Children’s Hospital, the Royal Children’s Hospital and Monash University in Victoria as well as over 40 academic institutions globally.

“The time for genuine collaboration between scientists, clinicians, organisations and government in Victoria has never been more important. Together with inputs from research centres of excellence like Hudson Institute, we can accelerate the integration of translational research into clinical care,” said CCF Executive Director, Jeff Darmanin.

Over the last four years, Hudson Institute HMPPMP scientists have established one of the largest biobank repositories of childhood cancer models in the world. Now, using state-of-the art functional genomic and multi-dimensional profiling technologies, the biobank is being used to develop the next generation of precision oncology treatments for paediatric cancer.

Centre for Cancer Research Head, Hudson Institute Associate Professor Ron Firestein explains, “Every child’s tumour is genetically unique and responds to treatment in a different way. This forward-thinking program has enabled scientists and clinicians to collaborate and build critical information into childhood cancer treatment pipelines.

“As researchers and clinicians, our common goal is finding a cure and better treatment outcomes for children. This program provides us with the vision to prepare for that,” he said.
Research at Victorian independent medical research institutes are funded via multiple sources including competitive and non-competitive grants from government and philanthropic organisations, donations as well as industry investment and sponsorship.

In 2019–20:

$348.8m In grant funding was awarded to these 12 Victorian medical research institutes

72% Of this grant funding was from government and philanthropic competitive grant schemes

$22.4m Of commercial funding from industry partners was received across five Victorian medical research institutes

$393.3m Was spent directly on research activities at these 12 Victorian medical research institutes
Free public lectures
- The Baker Heart and Diabetes Institute produced the *Dark Heart of Type 2 Diabetes* report, which shines a light on the far-reaching and lesser-known complications of diabetes. Dissemination of the report’s recommendations and findings was achieved through various health professional education activities.
- The Centre for Eye Research Australia transformed its annual Scientific Exchange event into a five-part *Hope in sight lecture series*, featuring Facebook Live presentations by CERA researchers on glaucoma, clinical trials, inherited retinal diseases and corneal research. The series achieved a reach of 86.4K on Facebook with videos of the sessions watched 24.6K times.
- The Florey Institute of Neuroscience and Mental Health held public lectures on their researchers’ work on stroke and dementia.
- The Murdoch Children’s Research Institute hosted a series of online seminars focussed on COVID research.
- The National Ageing Research Institute hosted a public webinar on healthy ageing and dementia.
- The St Vincent’s Institute of Medical Research held their annual *Food Matters Event*, a free lecture series open to the public and aimed at presenting biomedical research concepts to the layperson.

Events and tours
- The 11th *Baker Institute Educational Symposium* was held in Alice Springs. Topics covered included health literacy and the ability to obtain, read, understand, and use healthcare information to make appropriate health decisions and follow instructions for treatment in a culturally sensitive way.
- The Bionics Institute hosted various school and community organisation visits including the Open Garden Event, Rotary Club Tours, Governor of Victoria Tour, Mentoring Girls in STEM program presentations, and CEO Syndicate Tours.
- The Burnet Institute had a booth at the January 2019 *Midsumma Carnival* in support of the LGBTIQA+ community. More than a dozen staff and students attended to promote Burnet’s work and raise awareness about PreP.
- Hudson Institute of Medical Research hosted their *Young Women in Science program* from June to July 2019. Nine young women from secondary colleges in Melbourne’s southeast participated in a two-week immersive program at Hudson Institute that was funded as part of a concerted effort by the federal government to increase the number of women in science.
- WEHI hosted *Discovery tours* at the Institute and Alumni events internationally.
- Hudson Institute of Medical Research hosted a *pregnancy and fertility forum* in July 2019 where scientists and clinicians shared their discoveries that are improving female fertility and explained how to achieve a healthy pregnancy. Bec Vandyk’s ‘Biggest Placenta in the world’, a large knitted three-metre artwork of a placenta was on display.
- The National Ageing Research Institute hosted a *community consultation* with the Tamil Senior Citizens Fellowship (VIC) in April 2019. The forum included the presentation of Moving Pictures Films and associated resources as well as the collection of evaluation data.
- The Olivia Newton-John Cancer Research Institute hosted their *consumer advocacy information session* and onboarding training in September and November 2019.
A FRIEND IN NEED: BEFRIENDING AGED CARE RESIDENTS

Many older people living in residential aged care experience symptoms of depression, anxiety, and loneliness. In addition, the mental health of residents and staff were put under stress by the COVID lockdowns in 2020.

A team of researchers led by Professor Colleen Doyle at the National Ageing Research Institute (NARI) has been working towards providing better evidence for ways to support the mental health of older people in aged care as a part of the BEFRIENDAS study.

The study consists of randomised controlled trials to investigate the impact of befriending, provided by trained volunteers, on levels of depression, anxiety, social support, and loneliness in older people living in residential aged care.

“The idea for the project came from our previous research where we discovered that befriending (as well as cognitive behavioural therapy) led to significant improvements in depression and anxiety. We subsequently found that there was no research on befriending in residential aged care, so we wanted to investigate befriending in this setting,” says Professor Colleen Doyle.

While this research has attracted funding from Beyond Blue, the National Health and Medical Research Council (NHMRC) and Perpetual Impact since 2012, it is particularly relevant in the current times.

During COVID lockdowns in 2020, the intervention was adapted to include contact via video, phone or letters as well as face-to-face visiting. Qualitative research with volunteers showed they were able to adapt their connections using different technologies, and while face-to-face contact was preferred, other connections can still be valuable. Research with volunteers showed they enjoyed the experience of befriending as well.

The results of the befriending intervention have shown significant impacts on depression and anxiety for people living with chronic obstructive pulmonary disease in the community and are currently being applied and evaluated in residential aged care.

The research team at NARI are also examining the acceptability of befriending for older people from culturally and linguistically diverse backgrounds, and researchers are engaging older people from Chinese, Hungarian, Italian and other CALD backgrounds in befriending.
VICTORIAN INDEPENDENT MEDICAL RESEARCH INSTITUTES ACTIVELY SUPPORT AND CULTIVATE DIVERSE AND INCLUSIVE WORKING ENVIRONMENTS.

In 2019–20:

<table>
<thead>
<tr>
<th>Total research workforce of staff and students</th>
<th>4597</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total staff</td>
<td>3331</td>
</tr>
<tr>
<td>Research staff</td>
<td>2358</td>
</tr>
<tr>
<td>Corporate and research support staff</td>
<td>973</td>
</tr>
<tr>
<td>Total students</td>
<td>956</td>
</tr>
<tr>
<td>Visiting or temporary staff and students</td>
<td>310</td>
</tr>
</tbody>
</table>

Staff in professional services working in medical research institutes bring a diverse set of skills to the workplace including business development, legal and governance, clinical services, data science, finance and human resources.
GENDER EQUALITY IN THE MEDICAL RESEARCH INSTITUTE WORKFORCE

- 64% of the workforce are women
- 41% of senior researchers at medical research institutes are women
- Slightly more than half the executive staff at medical research institutes are women
- While the proportion of female senior researchers have increased since 2017, there are still gaps in achieving gender equity goals within the workforce pipeline, particularly at the Board and Director level.
- Victorian independent medical research institutes are pursuing programs and initiatives to support diversity and inclusion, with new initiatives being introduced and existing initiatives reviewed every year to address these gaps.

BREAKDOWN OF POSITIONS BY GENDER

<table>
<thead>
<tr>
<th>Position</th>
<th>Male (FTE)</th>
<th>Female (FTE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All staff</td>
<td>36%</td>
<td>2%</td>
</tr>
<tr>
<td>MRI Directors</td>
<td>75%</td>
<td>25%</td>
</tr>
<tr>
<td>Executive staff</td>
<td>49%</td>
<td>51%</td>
</tr>
<tr>
<td>Other non-executive corporate and support staff</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>Highest Seniority Researchers</td>
<td>67%</td>
<td>33%</td>
</tr>
<tr>
<td>Senior Researchers</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Senior Postdoctoral Researchers</td>
<td>46%</td>
<td>54%</td>
</tr>
<tr>
<td>Junior Postdoctoral Researchers</td>
<td>38%</td>
<td>62%</td>
</tr>
<tr>
<td>Non-academic group/Technical support staff</td>
<td>21%</td>
<td>79%</td>
</tr>
<tr>
<td>Research Higher Degree Students Domestic</td>
<td>32%</td>
<td>68%</td>
</tr>
<tr>
<td>Research Higher Degree Students International</td>
<td>36%</td>
<td>64%</td>
</tr>
</tbody>
</table>
Jaxon was diagnosed with Acute Lymphoblastic Leukaemia (ALL). Molecular analysis showed he had a rare mutation in his cancer that would respond best to a specific chemotherapy drug. He began an intense, nine-month regime of this drug and was considered cancer-free after one month. Despite this, Jaxon will need to continue treatment for two-and-a-half years to ensure the cancer doesn’t return. It’s patients like Jaxon who could potentially benefit from the targeted molecular approach of the HMPPM Program. | Hudson Institute of Medical Research