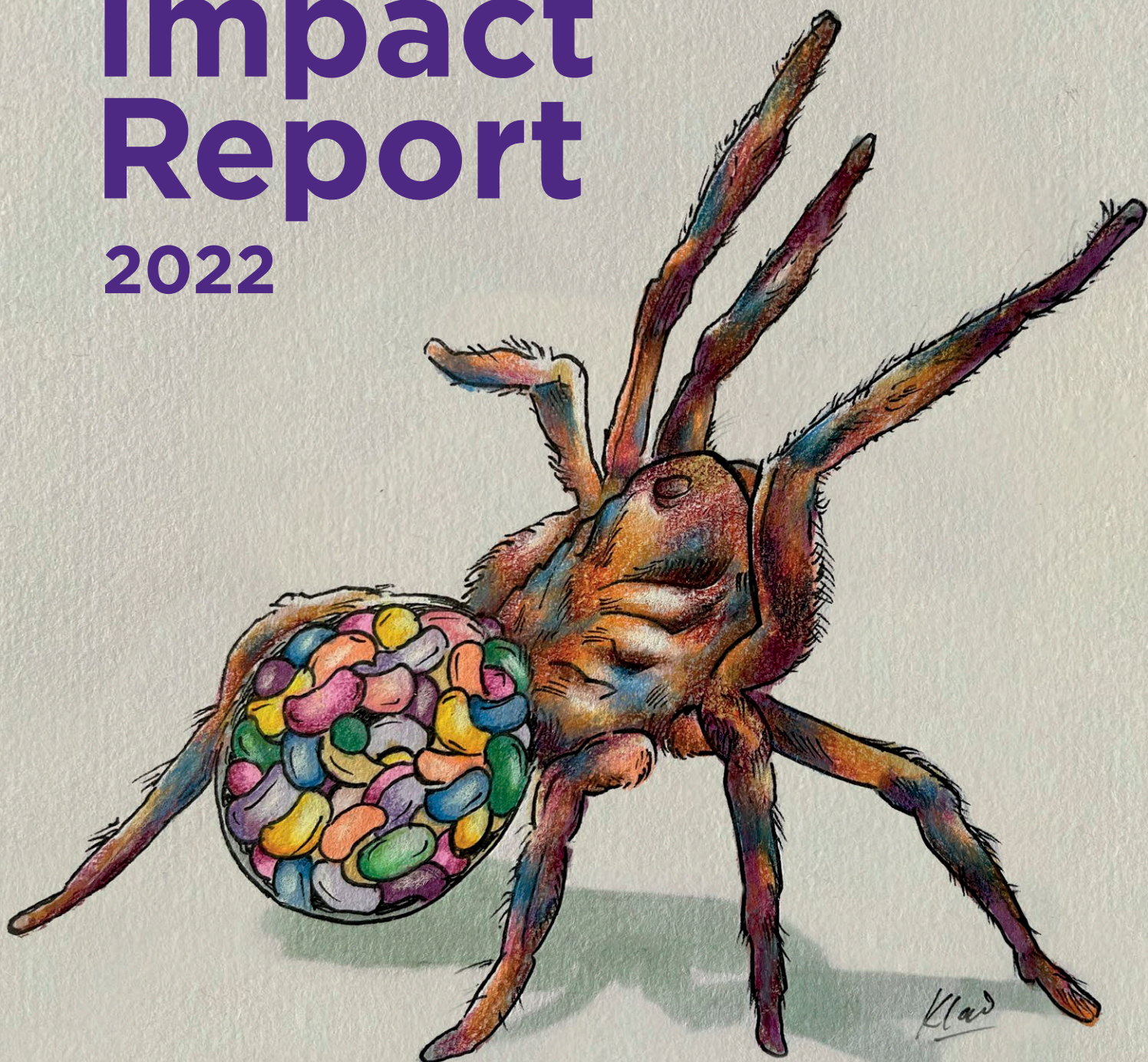


Institute for
Molecular Bioscience

Impact Report

2022



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

CREATE CHANGE

2022 Snapshot



>400

IMB staff and students



6

Highly cited researchers



>\$46M

Research income



157

HDR students



2

Royal Society Fellows



\$4.5M

ARC Training
Centre funding



404

Publications



24

Active fellowships



>\$3B

IMB IP since founding



85

High-impact
publications
(Impact factor >10)



2

ARC Laureates



16

spin-out companies
since founding



5

ARC Linkage Grants





COVER:

Treasure in Venom, Ken Lai

IMB researchers use molecules found in venom from deadly spiders to create treatments for heart attacks and strokes.

Acknowledgement of Country

We acknowledge the Traditional Owners and their custodianship of the lands on which our University stands. We pay our respects to their Ancestors and descendants, who continue cultural and spiritual connections to Country. We recognise their valuable contributions to Australian and global society.

The Institute for Molecular Bioscience dares to make our vision of a world free from disease a reality, by maximising interactions across scientific disciplines and geographic boundaries and unifying, supporting, and galvanizing our people and partners to deliver breakthrough science.

Our Institute was built to inspire scientists, to cultivate interaction across a wide range of scientific disciplines, to generate adventurous innovative ideas, to foster revolutionary discoveries, and to translate our knowledge of nature to discover cures for a better world.

IMB is where the next cure begins.

Contents

Message from the Executive Director	2
Message from the Advisory Board Chair	3
2022 Highlights	4
Centre for Population and Disease Genomics	6
Centre for Cell Biology of Chronic Disease	7
Centre for Superbug Solutions	8
Centre for Drug Discovery	9
Industry engagement	10
Community and donor engagement	11
Student life	12
Learn more	13

Message from the Director



Welcome to the 2022 Institute for Molecular Bioscience Impact Report.

It's been a wonderful 12 months for IMB – we held our position as Australia's number one research institute on the Nature Index and our top spot in the country for research commercialisation with 14 spin-out companies. We generated almost \$50 million of research income – approximately 12% of the University's total research income – have 6 highly cited researchers and our team received over 25 external awards in recognition of academic excellence.

The Institute also undertook a number of outreach activities, spearheaded by our 'Soils for Science' program, that have significantly improved our profile in the public, political and industry spheres.

According to recent market research IMB is now the second most recognised research entity in Queensland. This is important because awareness and trust in our capacity to develop solutions to major problems strengthens our ability to attract top-tier researchers and generate a pipeline of students – who will become the leaders of tomorrow.

Like any organisation, we must always have a focus on the future and at IMB we initiated a number of internal changes in 2022, which I believe will secure our position as an innovative, multidisciplinary research institute.

We have adopted a more agile structure through the appointment of a Director of Translation and Director of Higher Degree Research, and we have established four divisions or Centres:

- Centre for Drug Discovery
- Centre for Cell Biology of Chronic Disease
- Centre for Superbug Solutions
- Centre for Population and Disease Genomics

These Centres will provide a focus for students and staff, ensure a common purpose, encourage ambitious co-designed programs of research and interdisciplinary industry collaborations, and the thematic structure supports clear messaging to stakeholders, partners, and funding bodies.

IMB's Senior Executive Team will also be aligned to income-generating activities, namely Research, Industry & Translation, Advancement & Engagement, and Training & Education.

Finally, we reinvigorated and expanded IMB's Advisory Board to include individuals with expertise that directly align to our income-generating activities. I am delighted to share with you that Professor Bob Graham, the founding Executive Director of the Victor Chang Cardiac Research Institute, has accepted our invitation to chair the new-look Advisory Board. I look forward to learning from his extensive experience and insight after 25 years heading up the leading heart research centre.

The Impact Report is a summary of IMB's work across all areas in 2022; if you would like further information, please visit our website or reach out to me directly if you would like to discuss an aspect of our work in more detail.

Professor Ian Henderson
Executive Director,
Institute for Molecular Bioscience

Message from the Advisory Board Chair



I am delighted to be sharing my first message as Chair of the Institute for Molecular Bioscience's rejuvenated Advisory Board.

The Board's mission is twofold: to advise the Executive Director, Professor Ian Henderson, on raising the profile of IMB, locally, nationally and internationally; and to enhance funding support from philanthropy, government and industry to enable IMB to grow and expand, in line with its impeccable scientific track record.

As former Executive Director of the Victor Chang Cardiac Research Institute, I have first-hand experience of the challenges and opportunities in Australia's research sector and the importance of having a strong public profile and diverse income streams for an institute's continued success.

Taking on the challenge of leading the Board has been a particular pleasure for me as I have long admired the ground-breaking research done by the IMB. By any measure, it is Australia's leading biomedical research institute that has positively impacted the lives of millions world-wide through its discoveries and the commercialisation of its research; achievements that have gone under-recognised and under-supported.

In 2022, Professor Henderson and I were fortunate in recruiting an extraordinarily gifted board with a diverse range of expertise and experience.

The board will hold its first official meeting in 2023. Professor Henderson and I have had discussions with each of the members prior to and following their agreement to join the board, and I am confident that their energy, passion and breadth of expertise will elevate the Institute. I am excited to see what we can achieve for the IMB and have given the Board stretch goals of making the Institute as widely known and loved as the Brisbane Broncos, and increasing philanthropic support ten-fold over the next five years.

I congratulate Professor Henderson and all IMB staff, students, partners and supporters for their efforts and achievements in 2022, sincerely thank all of the Board members for agreeing to be involved in this exciting challenge, and am grateful to Professor Debbie Terry, AO, Vice-Chancellor, The University of Queensland for endorsing the Board's formation and goals.

Professor Robert M. Graham
AO, MD, FAA, FAHMS
Chair, IMB Advisory Board

IMB Advisory Board

The Honourable Kate Jones
Executive Director,
Tech Council of Australia
and former Queensland
Government Minister

Ms Lorraine Chiroiu
CEO of Ausbiotech, the
leading Australian industry
body for the life sciences

Ms Kylie Blucher
Managing Director,
Nine QLD & Northern NSW

Ms Tonianne Dwyer
Deputy Chancellor of
The University of Queensland
and Non-Executive Director
on multiple boards

Ms Tanya Titman
Chief Digital and Innovation
Partner, BDO

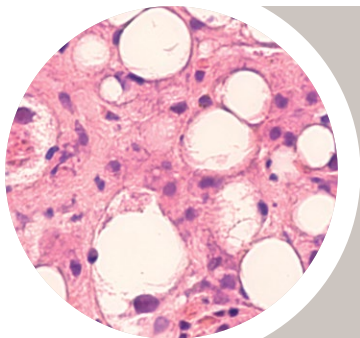
Mr Richard McDougall
Managing Director,
Hamilton12, an investment
advisory service

2022 Highlights



Deadly venom treatment for heart attacks reaches next milestone

A potentially life-saving treatment for heart attacks and stroke made from a spider venom molecule took a step closer to human trials, after a \$23 million investment in start-up company, Infensa Bioscience. The drug candidate, which was licenced by UQ's commercialisation company UniQuest, was developed by IMB researchers. It uses a molecule found in the venom of the K'gari (Fraser Island) funnel web spider and can potentially prevent damage caused by heart attacks and stroke. There are currently no drugs in clinical use that prevent damage caused by heart attack, which is the leading cause of death worldwide.



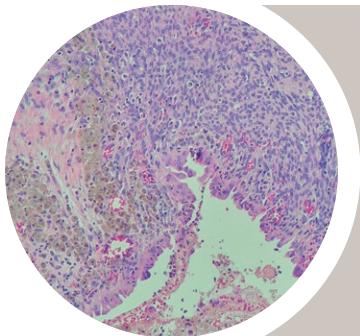
Disrupting the circadian clock protects the liver

IMB researchers investigating why disruption of the circadian clock is associated with obesity, type 2 diabetes and liver diseases discovered that the liver of males diagnosed with hepatic diseases change sex as part of a potential self-protective mechanism. There are significant differences between the metabolic function of male and female livers, and researchers found the more advanced the disease, the more feminisation was found in the liver tissue. The team are now investigating whether behavioural and hormonal interventions are possible treatments for liver disease.



Genes reveal coffee is safe during pregnancy

IMB researchers used genetics to analyse coffee drinking behaviour, finding that limited coffee consumption during pregnancy didn't increase the risk of miscarriage, stillbirth, or premature birth. The study found coffee-drinking behaviour is partly due to genetics, with a specific set of genetic variants affecting how much coffee we drink. These genetic variants not only affect coffee consumption in the general population but also in pregnant women.



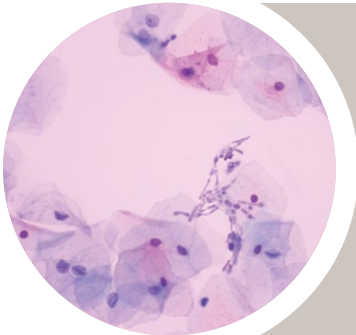
Endometriosis and ovarian cancer genetically tied

IMB researchers demonstrated a genetic link between endometriosis and ovarian cancer subtypes, enabling them to identify potential drug targets for therapy and increasing the understanding of both diseases. The research showed that individuals carrying certain genetic markers that predispose them to having endometriosis also have a higher risk of certain epithelial ovarian cancer subtypes, namely clear cell and endometrioid ovarian cancer. The study found genes that could be drug targets to treat both endometriosis and epithelial ovarian cancer in the future.



How to stop painful chemo for kids

IMB researchers received funding to continue research to stop the debilitating painful side-effects of chemotherapy for children. Although children have a higher survival rate than adults following cancer treatments, they can suffer side effects well into adulthood. The team are analysing how specific drugs could prevent a cascade of inflammation caused by chemotherapy, which lead to tingling and numbness in hands and feet, and muscle pain and weakness, making everyday tasks a challenge.



Metal shows its steel against fungal infections

IMB researchers found that metal compounds could be the answer to the growing problem of drug-resistant fungal infections. The study discovered that one in five metal compounds analysed displayed anti-fungal properties and showed potential to be used in the development of much-needed antifungal drugs. Currently only 10 antifungal drugs are in clinical development and not all of them will pass trials to make it to patients so more options are needed to prevent a resistance crisis.



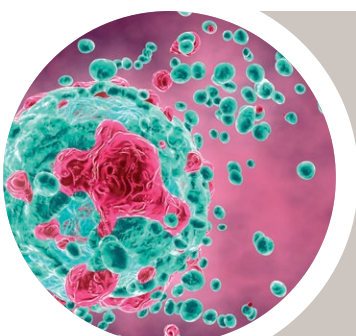
Bull ant evolves new way to target pain

IMB researchers found a bull ant venom component that exploits a pain pathway in mammals, a discovery that could have implications for people with long-term pain. The venom molecule matched the sequence of mammalian hormones related to Epidermal Growth Factor (EGF). EGF-inhibitor drugs are readily available on the market and used in anti-cancer therapy to slow tumour growth. It's hoped that by highlighting the role of this signalling pathway in pain, it will encourage the development of different strategies for pain treatment, especially long-term pain.



Reaching new heights in largest-ever genome study

IMB researchers led the study of genetic variants that influence height, working with 600 researchers to analyse data from 5.4 million people. The study opens the door for DNA to be used to predict height more accurately than ever before. It also paves the way for research into other traits and diseases controlled by genes.



United States enlists IMB to seek new ways to battle melanoma

IMB researchers were awarded funding from the US Department of Defense to help combat an expected escalation in skin cancer cases among troops who served in Iraq and Afghanistan. Only 13 per cent of the 3 million people deployed wore sunscreen. The research team are combining work in cancer biology and neuroscience to seek new ways to battle melanoma, which is often fatal because it is particularly efficient at travelling to the brain and thriving once it gets there.

Centre for Population and Disease Genomics

Harnessing genomics to overcome disease

Genetic factors contribute to 19 of the top 20 causes of death in Australia. We study the genome to improve diagnosis and treatment associated with common diseases such as heart disease, endometriosis, motor neurone disease, liver disease and cancer, diabetes and psychiatric disorders.

Our ultimate goal is to contribute to the development of personalised or precision medicine, where prediction, prevention and treatment of disease are based on an individual's genome, rather than the current one-size-fits-all basis.

We harness the incredible advances in genomic technology over the past 20 years to directly measure a person's DNA and understand how differences between people in their DNA contribute to differences in susceptibility to disease and response to treatment. We study expression of genes annotated to individual cell-types or distributed spatially within a tissue.

These approaches allow us to develop better and more personalised ways to predict, prevent, diagnose and treat these diseases.

We use interdisciplinary skills to understand the biology of disease to know what questions to ask, then use advanced computing, statistics and maths to investigate these questions.

A key component of our work is the development of new methods and software that researchers around the world use to address a multitude of questions. Some of our methods use genetic big data to predict which medicines will fail which could save millions of dollars in clinical trials and help prioritise drugs taken forward into clinical trials. We are also working on methods that will ensure translation of results from genetic studies across people of all ancestry that will help ensure health equality. This contribution to global research compounds the impact of our work and advances the field worldwide.



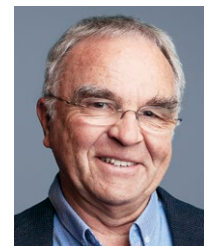
DIRECTOR
Professor Naomi Wray
Program in complex trait genomics



Professor David Evans
Genetic Epidemiology



Associate Professor Allan McRae
Systems Genomics



Professor Grant Montgomery
Genomics of reproductive disorders



Dr Quan Nguyen
Genomics and Machine Learning



Professor Peter Visscher
Program in complex trait genomics



Associate Professor Loic Yengo
Statistical Genomics

Centre for Cell Biology for Chronic Disease

Tackling disease through study of the cell

Chronic diseases are long-lasting, complex and can greatly affect both the quality and length of your life. One in two Australians lives with a chronic disease, and their prevalence is higher amongst women and in the 45+ age group. The occurrence of chronic diseases continues to rise at an alarming rate both in Australia and globally.

We are tackling a range of chronic diseases, including cancer, neurological dysfunctions, cardiovascular and inflammatory diseases, by studying the fundamental unit of life – the cell.

We use a sophisticated suite of multidisciplinary techniques and technology to study the cell in isolation and in the more complex environment of the body, investigating how healthy cells function and what goes wrong in disease.

We examine how cells develop, specialise, age, and die. We uncover the structure of cells, how their internal machinery works, and the biology of specific cell structures involved in disease.

We investigate how cells assemble into complex structures, how they respond to stimuli including injury and infection, how they spread throughout the body, how they communicate and how they trigger disease.

This fundamental knowledge allows our researchers to understand what drives disease at a cellular level, and to develop targeted therapies that specifically block harmful cell functions, such as inflammation, to relieve patient symptoms and treat disease.

Research from our Centre has been spun out into companies that are trialling new treatments for heart attack, stroke, and inflammatory diseases, bringing our discoveries closer to the clinic.



DIRECTOR
Professor Brett Collins
Membrane trafficking at atomic resolution



Dr Nick Ariotti
3D structure of cells at molecular resolution



Associate Professor Frederic Gachon
Physiology of circadian rhythms



Dr Emma Gordon
Dynamic control of vascular growth and function



Dr Anne Lagendijk
Cellular mechanisms to maintain a healthy vasculature



Dr Christian Nefzger
Cellular reprogramming and ageing



Associate Professor Nathan Palant
Stem cells and cardiovascular development



Professor Rob Parton
Role of the cell surface in health and disease



Professor Kate Schroder
Inflammasomes



Professor Jennifer Stow
Protein trafficking and inflammation



Professor Matt Sweet
Innate immunity, infection and inflammation



Dr Mel White
Dynamics of morphogenesis



Professor Alpha Yap
Cadherin cell-cell adhesion

Centre for Superbug Solutions

Combating the urgent global threat of antimicrobial resistance

The Centre for Superbug Solutions combats infectious diseases, with a particular focus on antimicrobial-resistant infections.

The World Health Organization has labelled antimicrobial resistance (AMR) one of the greatest global threats to human health. More than one million people per year die from these infections, which are caused by drug-resistant bacteria, parasites, and fungi. If we don't act now, more than 10 million people per year are predicted to die from these infections by 2050.

The Centre brings together a diverse group of multidisciplinary researchers working together to tackle infectious disease and AMR in four main ways.

We conduct discovery research to advance our understanding of infectious microbes, how they cause disease and their interactions with current treatments, including how resistance develops.

We develop better diagnostics to quickly diagnose infections so doctors can give the right treatment in time, and reduce unnecessary antibiotic use, one of the main drivers of AMR.

We discover and develop new treatments, including new and improved versions of existing antibiotics, and new non-antibiotic treatments, that help our immune system fight resistant infections.

We develop new vaccines to prevent life-threatening infections.

We partner with hundreds of laboratories around the world through the Community for Open Antimicrobial Drug Discovery, which crowdsources compounds and investigates their potential as new treatments for drug-resistant infections.

The Centre for Superbug Solutions is leading the global fight against AMR.



Director
Professor
Mark Schembri
Bacterial pathogenesis and antibiotic resistance



Professor
Mark Blaskovich
Superdrugs vs superbugs



Professor
Denise Doolan
Immunology of infectious disease



Professor
Ian Henderson
Bacterial infections and immunology



Professor
Waldemar Vollmer
Bacterial cell wall



Professor
Mark Walker
Strep A pathogenesis and treatment

Centre for Chemistry and Drug Discovery

Designing and discovering new treatments

We discover and develop new medicines to treat some of the world's deadliest diseases, including heart attack, stroke, respiratory diseases and cancer, and conditions that significantly affect quality of life, such as inflammatory diseases and chronic pain.

We also discover new medicines to treat companion animals and livestock, and eco-friendly insecticides to protect Australian crops.

We create new medicines by designing chemicals to target proteins that cause disease or by copying molecules found in nature. Australia's unique biodiversity provides a treasure trove of clues to new medicines in venomous animals and plants, algae and microbes from soil.

We conduct basic research to improve our understanding of the molecular mechanisms of disease development and how drugs act in the body. Our Centre researchers investigate shapes and surfaces of proteins for crevices where experimental drugs could fit.

We harness plants and algae as innovative systems for manufacturing medicines that are more accessible and affordable.

We also create new methods and platform technologies to more efficiently and more quickly discover and construct new drug candidates.

Our research is translated into new partnerships with the pharmaceutical industry, and into spin-out companies, including one that has progressed six drugs so far into human clinical trials. We have worked with local government to develop baits that help control cane toads and advised on design of a bee-friendly, plant-derived insecticide.

We partner with the community through Soils for Science, a citizen science program where people send soil samples.



Director
Professor David Fairlie
Chemistry and human therapeutics



Professor
Rob Capon
Molecular biodiscovery: learning from nature



Professor
David Craik
Protein structure in drug and insecticide design



Professor
Ben Hankamer
Bioinspired design of solar biotechnology systems



Professor
Glenn King
Bugs and drugs



Professor
Richard Lewis
Pharmacology of marine toxins



Associate Professor
Markus Muttenthaler
Neuropeptide research



Associate Professor
Mark Smythe
Combinatorial chemistry and molecular design



Professor
Irina Vetter
Pain pathways

Student life

Training the next generation of STEM leaders is a vital part of IMB's aim to develop solutions to some of the world's toughest health and environmental challenges.



157
HDR students

154 PhD
3 MPhil

105 Female
52 Male

55 Domestic
102 International

34
<25 yrs

116
25 - 34 yrs

7
35+ yrs

Australia	51
China	40
Vietnam	8
India	7
USA	4

Student experience

We seek to foster a collaborative and inclusive environment that provides our students with opportunities to build their skills and enhance their career prospects – whichever path they take. In 2022, we held our inaugural HDR Training Week, which included career planning, time management, writing and networking events.

Our student association, SIMBA, nurtures a strong community through social activities, including welcome events for new students, a Friday bar and trivia nights, and professional development events, including our annual student symposium. SIMBA executive members ensure students are represented on Institute committees so the student voice and perspective is included in high-level decision-making.

Global Challenges PhD Scholarship

We welcomed our first cohort of Global Challenge Scholars in 2022. Much more than just a scholarship, this initiative brings together bright young minds to collectively tackle a global challenge. Our inaugural scholars are working together on solving problems using genomics, and on combating antimicrobial resistance. In addition to a higher stipend, the Global Challenges Scholarship offers travel support, specialised training in research and transferable skills, and the potential of an internship with a partner organisation.

“The Global Challenges PhD Scholarship is exciting because you have four other friends who are starting out on the journey on trying to solve this problem, but in different ways. Combining our projects together allows us not only to learn so many skill sets and have a greater appreciation for the problem, but hopefully helps us to have some little contribution to tackling that challenge.”

Max Harding
Global Challenges Scholar



“The research performed at IMB is world class, the access to research services and facilities is exceptional, and with a dedicated HDR support team, the student support at IMB is one of the best at UQ.”

“The benefits of being an IMB PhD student include dedicated research facilities that allow a high level of training for research techniques, an established collaborative research environment with regular seminar opportunities for researchers to learn from their peers, and a great student association dedicated to enhancing all aspects of the student experience at IMB.”

Jessica von Pein
IMB PhD Candidate

2022 Student Awards

Charu Deepika
Young Scientist Encouragement Award, ATA Scientific Pty Ltd

Kaitlyn Flynn
Roger Melick Young Investigator Award, Australian and New Zealand Bone Mineral Society Meeting

Kahli Jones
Best Student Presentation, 2022 Australian Vasacular Biology Society Meeting

Xiaodong Mo
Best Oral Presentation, 2022 International Clinical Cardiovascular Genetics Conference

Isaac Tucker
Fulbright Future Scholarship

Community and donor engagement

The generous support of our donors allows us to continue to pursue ideas that drive both drug discovery and cures, while community engagement shines a light on the work we do to help solve some of the world's biggest health and environmental challenges.



Brisbane Festival

We partnered with the Brisbane Festival, one of Australia's leading arts festivals, to showcase our science to the community. A series of three talks, aptly named 'Sip and Science', paired a festival artist with an IMB researcher in an hour-long discussion.

The installation *Ephemeral* provided a conversation starter for our Executive Director, Professor Ian Henderson, to explore the overlap between science and art with the artists behind *Ephemeral* – Zara Pasfield and Renzo B. Larriviere from Atelier Sisu – and Louise Bezzina, Artistic Director of the Festival.

Dr Enakshi Sinniah and Geoff Cobham, Artistic Director of Patch Theatre, discussed all things light, dark and colour, including how the untapped powers of 'the dark side' of DNA could help us discover what influences and causes heart disease. Professor Mark Blaskovich joined Patience Hodgson, former frontwoman of The Grates, to chat chemistry and attraction, and how these apply to developing new antibiotics.



Soils for Science reaches 10,000 samples

Since launching in March 2021, citizen scientists have dug deep and collected an amazing 10,000 soil samples, helping in the hunt for new medicines. The Soils for Science research team has so far investigated 10,000 molecules found from microbes isolated from different soil samples and identified 41 that killed multi-drug resistant bacteria, 36 of which proved to be non-toxic to human cells.

After investigating the chemistry of these 36 molecules, the researchers found that 17 of them had structures that haven't ever been reported, making them potential candidates to be developed into new antibiotics.

Managing Director Dr Zeinab Khalil said, "launching Soils for Science was the best moment of my life and I've been touched by how much the community has embraced the program. It's very touching to receive such wonderful messages from the public thanking us and showing their appreciation for the work we're doing to discover new antibiotics."



Ignite Innovation

Great inventions and breakthroughs start with a spark of an idea. To ignite these ideas that spark change across the globe, IMB held Ignite Innovation, a Shark Tank-style live event where researchers pitch their impact projects for seed funding.

Dr Conan Wang was our 2022 winner, who inspired the audience with his research on reawakening the immune system to fight cancer. To improve on the existing treatments that use this strategy, Dr Wang will harness mini-proteins called peptides. Peptides have the same activity as the antibodies currently in use, but their smaller size offers additional benefits, including significantly increased tumour penetration and the ability to be modified more easily.

Our other finalists were Associate Professor Frederic Gachon, who raised money towards his work transforming intensive care units to prevent PTSD, and Dr Enakshi Sinniah, who received support to enhance early diagnoses to tailor treatments for heart disease.

Industry engagement

Our partners are an integral part of our vision, and we have an impressive record of partnering to deliver translational outcomes.



16

spin-out companies



28+

patent families



86

industry partners



4

new licences executed



13

new invention disclosures

Collaboration to advance development of cancer biopsy alternative

A molecule developed in an IMB laboratory will be adapted and refined into a potential alternative to cancer biopsy through a collaboration between a pharmaceutical company and UQ's research commercialisation company.

Telix Pharmaceuticals and UniQuest Pty Ltd announced in October 2022 that they are developing an undisclosed targeting peptide originally from Professor David Craik's laboratory into an imaging agent that could guide patient selection for immunotherapy.

Immunotherapy treats cancer by disrupting the suppression of the immune system that occurs in some tumours – however, responses are highly variable.

Dr Michael Wheatcroft, Chief Scientist at Telix Pharmaceuticals, said there was an urgent need for tools that could predict when a patient is likely to respond to immunotherapy.

“Immune checkpoint inhibitors have demonstrated the power of immunotherapy, however in most cases it is still a minority of treated patients that respond,” Dr Wheatcroft said.

“Currently, this is done by an invasive biopsy, with results that can be misleading since checkpoint protein expression can be extremely heterogenous both within a single tumour and between metastatic tumours.

“We are pleased to be working with Professor Craik and his lab, and to apply our expertise in radiopharmaceuticals to further advance this exciting new technology first developed at UQ.

“By using targeted radiation to assess the status and presence of this checkpoint protein throughout the body, we can potentially find a non-invasive method to paint a more useful picture of this immunotherapy target, and better select patients suitable for treatment.”



IMB Inflazome Translational Award

Winner and finalists of the (L-R): Dr Kaustav Das Gupta, Dr Hana Starobova, Dr Conan Wang, Dr Melanie Oey; Professor Deborah Terry AO and Professor Ian Henderson.

Improving wound healing using photosynthetic light

An innovative idea to use algae in bandages as a low-cost solution to heal wounds has received the first IMB-Inflazome Translational Award.

Dr Melanie Oey won the \$125,000 award, which is funded from royalties from the sale of IMB spin-out Inflazome Pty Ltd, to use microalgae to develop simple, cheap, “off-the-shelf” wound dressings that continuously supply oxygen.

“Wound care is a global problem which costs billions of dollars each year,” Dr Oey said.

“Oxygen is essential for all wound healing processes, but hyperbaric chamber treatments are seldom used because they are expensive and logistically challenging.”

“Algae can provide effective wound healing at the fraction of the cost of current therapies.”

Dr Oey received the award after delivering the winning pitch at IMB’s Research Engagement Dinner in November 2022, as judged by a panel of academic and industry judges.

Learn more

Subscribe to our newsletter

imb.uq.edu.au/subscribe

Find out more about our work

imb.uq.edu.au

You can also follow us on Facebook, LinkedIn, Instagram, Twitter and hear from our researchers via our podcast series The Edge Conversation.



Read our magazine



We are tackling the problem of drug-resistant bacteria through developing new diagnostics and treatments, and by empowering the community with knowledge on how to fight back against the threat of superbugs.

imb.uq.edu.au/the-edge-magazine



CREATE CHANGE

Institute for Molecular Bioscience

Queensland Bioscience Precinct (Building 80)
The University of Queensland
306 Carmody Road, St Lucia QLD 4072 Australia

Phone: +61 7 3346 2222

imb.uq.edu.au