

2022

Annual Report



A more equitable world
through better health

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Image: Older children help the younger ones enjoy the playground located at Pho Gyi monastic school, Myo Thit township, Magway region, Myanmar. Photo taken by Maung Aye Chan with parental consent and used with permission.





Burnet Institute is an independent, not-for-profit medical research institute passionate about social justice, equality, and evidence-based research.

OUR VISION

A more equitable world through better health.

OUR PURPOSE

Create and translate knowledge into better health so no-one is left behind.

OUR GLOBAL IMPACT



Priority countries:

Australia | Papua New Guinea | Myanmar

We also support and contribute to research and public health programs in other Asian, Pacific and African countries.

At Burnet Institute, we proudly acknowledge the Boon Wurrung people of the Kulin Nations as the Traditional Custodians of the land on which our office is located and recognise their continuing connection to land, waters and community. We acknowledge Aboriginal and Torres Strait Islander peoples as Australia's First Peoples and acknowledge that sovereignty was never ceded. We pay our respect to Elders past and present, and extend that respect to all First Nations people.



Chair's Message

Mary Padbury

Chair
BA, LLB(Hons)

A handwritten signature in black ink that reads "Mary Padbury".

Chair of Burnet Institute from 2019. Director since 2011. Director, Commonwealth Bank of Australia, Brandenburg Ensemble Limited and Richmond Football Club Limited. Former Vice Chair of Ashurst LLP, and Chair of Ashurst Australia and IP Attorneys Board.

From its inception as a small virus laboratory in the 1980s to its place now as a leading medical research institute and an international NGO, Burnet has remained focused on its pursuit of research excellence and its commitment to global health equity.

In recent years, the Board and Executive have sought to strengthen the Institute's governance and capacity to oversee and manage respectively our expanded remit in the most cost-effective, sustainable and flexible way.

It makes me enormously proud to say that, after years of concerted effort and support by many, we have successfully positioned ourselves for further growth, independence and, most importantly, enhanced impact, in the years ahead.

The recently relaunched Burnet brand builds on our increased profile as a result of the ongoing pandemic and recognises what make us distinct being our integration of lab-based and frontline teams, our entrepreneurial mindset and our commitment to collaborative initiatives in communities that need our support. Importantly, it will enhance our ability to tell our story effectively to build and consolidate the support base we need to continue our work.

Our vision for a more equitable world through better health goes hand-in-hand with our commitment to reconciliation. In May 2022, we launched our first Reflect Reconciliation Action Plan (RAP) with full endorsement from Reconciliation Australia. In the months since, we have formalised our commitment to fostering the next generation of research leaders in First Nations health and to increasing employment and career development opportunities for Aboriginal and Torres Strait Islander peoples at Burnet. We have also expressed our support of the Voice to Parliament which we believe is a positive step forward in helping address many of the inequities we see, especially in the health of indigenous populations.

Our work in the Asia-Pacific region continues to gain momentum with ongoing initiatives, such as the Healthy Mothers, Healthy Babies (HMHB) program in Papua New Guinea (PNG) and newly established projects in countries including PNG, Myanmar, Laos, Cambodia, Vietnam and Thailand to address vector-borne diseases like malaria and ongoing support for COVID-19 responses in Pacific Island nations. Across all these endeavours, we are committed to working with communities to identify health priorities, co-designing the most appropriate responses, and aligning our projects with national and regional health policies and programs.

I would like to sincerely thank all those who generously support our work including State and Federal governments and their agencies, private trusts, foundations, corporations and individual donors.

I also wish to express my gratitude to all at Burnet including our Director and CEO, Professor Brendan Crabb AC. Their hard work and commitment have contributed to our work to create a better, healthier world in which no-one is left behind.



Director's Message

Professor Brendan Crabb AC

Director and Chief Executive Officer
PhD, FAA, FAHMS, FASM

A handwritten signature in black ink, appearing to read 'B Crabb'.

Director and CEO since 2008. Chair, Pacific Friends of Global Health. Chair, Australian Global Alliance. Member, Victorian Government Medical Research Strategic Advisory Committee. Member, mRNA Victoria Advisory Board.

The first year of our Burnet 2030 strategy saw a year of growth and ambition realised. Burnet 2030 is designed to progress towards our vision of achieving a more equitable world through better health, with a central theme of making an impact in a rapidly changing world, one where climate and environmental change are now front and centre in global health. With this strategy, we set out to continue to build a strong institution, capable of serving our communities for decades to come.

Global collaboration has never been more important. Strong, strategic relationships expand our collective capacity to respond to emerging health threats, and to tackle the most deeply entrenched inequities. In the past 12 months, Burnet has formed several critical collaborations:

- Wellcome Leap Breakthrough Network membership. This is a global alliance of research organisations that aims to speed the progress of research breakthroughs into real-world improvements in human health.
- Moderna partnership. This will see our research teams' novel vaccine antigens for malaria, SARS-CoV-2 and hepatitis C developed by Moderna into mRNA candidates, ready for testing in pre-clinical models.
- Biocurate will provide Proof-of-Concept funding to validate and progress next-generation HIV antivirals, developed by Burnet in collaboration with Monash Institute of Pharmaceutical Sciences. The aim is to address drug-resistant strains of HIV, safeguarding HIV therapy for the next generation.

The continued presence of COVID-19, and ongoing challenges from other epidemics, underscores the importance of our ongoing work in infectious disease. Our integrated teams of lab-based scientists and field-based workers are making remarkable progress towards the big goals in malaria, hepatitis C and B, tuberculosis, HIV and now COVID-19. And the Burnet Diagnostics Initiative, benefitting from a savvy 'industry-ready' approach, is developing affordable point-of-care tools that can be made and shared with communities that might not otherwise be able to access the life-saving benefits of timely diagnosis. Alongside this, we worked with partners and communities to address structural constraints in health systems, in culturally appropriate ways, so they can adequately respond to current and emerging health threats, such as future pandemics.

Our Maternal, Child and Adolescent Health program continues to reduce mortality including stillbirths, and ensure children and adolescents thrive, with a focus on key contributors to their health and wellbeing outcomes, especially in under-resourced communities.

Of all the challenges ahead, the impact of climate and environmental change on global health equity is undoubtedly one of the most complicated, and most urgent. A rise in insect-borne diseases, further pandemics arising from humans encroaching further into other animal ecologies, and impacts on food and water security leading to transmigration and all that are associated with it, are some of the threats emerging. Burnet's approach is critical to mitigating their effects.

We owe a debt of gratitude to the partners, donors, and supporters who share our vision for a world in which everyone has access to the life-changing benefits of world-class health research, implemented by robust health systems. We look forward to working shoulder-to-shoulder with them, towards innovation, equity and justice. Thank you to all at Burnet who have made such a positive contribution to improving the health of the communities with whom we work. Your dedication and passion are truly inspiring.



“

Health equity will only truly exist when science reaches far beyond race, gender, sexuality, status or location. At Burnet, we actively work towards a healthier world, ensuring all people have access to life-changing research and health programs.”

Professor Brendan Crabb AC,
Director and Chief Executive Officer, Burnet Institute



Young Burmese women engaged in conversation and learning at Tharthanagoneyi nun school, a secular school located in Magway township, Magway region, Myanmar. Photo taken by Maung Aye Chan and used with permission.



Burnet's Board and Executive leadership team are committed to achieving our purpose

The Board and Executive leadership team comprise highly qualified individuals who have rich and diverse skillsets spanning medical research, public health, medicine, law, business development, advocacy, communications, finance, corporate governance and innovation.



Mary Padbury
BA, LLB(Hons)
Director and Chair



**PROFESSOR
Brendan Crabb AC**
PhD, FAA, FAHMS, FASM
Director and Chief Executive Officer

Directors



Robin Bishop
LLB(Hon), BCom, BA
Director 2012-2021, 2022-present. Founder and Managing Partner, BGH Capital. Former Head and Executive Director, Macquarie Capital Australia and New Zealand.



**PROFESSOR
Sandra Eades AO**
PhD, FASSA, FAHMS
Director since 2020. Associate Dean, Indigenous for the Faculty of Medicine, and Rowden White Chair, The University of Melbourne. Director, Outback Stores.



**PROFESSOR
Peter Colman AC**
BSc(Hons), PhD, FAA, FRS, FTSE
Director from 2011-July 2022. Laboratory Head, WEHI. Member, Commercialisation Committee.



**ASSOCIATE PROFESSOR
Helen Evans AO**
BA, BSocAdmin
Director since 2015. Associate Professor (Hon) The Nossal Institute for Global Health, The University of Melbourne. Vice Chair of the Board, The Fred Hollows Foundation. Former Deputy CEO of GAVI Alliance.

**Benjamin Foskett**

BBus(Acc), FAICD

Director since 2013.
Executive Director of Pathway
Services Pty Ltd.

**PROFESSOR
Christina Mitchell AO**

MBBS, PhD, FRACP, FAHMS

Director from 2011-July 2022.
Dean of Medicine, Nursing and Health
Sciences, Monash University. Director,
Hudson Institute of Medical Research.

**Leigh Jasper**

BE(Hons), BSc

Director since 2016.
CEO, Saniel Ventures. Co-founder
and former CEO of Aconex Limited.

**Miche Hartigan**

Director since 2017.
Managing Partner, MJH Consulting.
Advisory Board Member, Newgate
Communications.

**Alison Larsson**

BEC, CPA, GAICD

Director since 2017.
Former Director, IFM Investors.
Former Chief Risk Officer, Global
Technology Services and Operations,
ANZ Banking Group.

**DOCTOR
Serge Scrofani**

BSc(Hons), PhD, MBA, GAICD

Director since 2019.
Vice President, Strategy and Corporate
Development, CSL Limited. Director,
AusBiotech Limited, and FinCap Pty Ltd.

**PROFESSOR
Sharon Lewin AO**

FRACP, PhD, FAHMS

Director from 2014-April 2022.
Director, The Peter Doherty Institute
for Infection and Immunity. Professor
of Medicine, The University of
Melbourne. Former Co-Head of Burnet's
Centre for Biomedical Research.

**Michael Ziegelaar**

LLB(Hons), BEc, LLM

Director since 2015.
Partner and Co-Head, Equity Capital
Markets (Aust) Herbert Smith
Freehills. Director, Seven West Media.

Executive Leadership Team

Director and CEO

Professor Brendan Crabb AC

Deputy Directors

Professor Margaret Hellard AM

Professor James Beeson

Associate Professor David Anderson

Chief Operating Officer

Mark Tennent

**Chief Financial Officer
and Company Secretary**

Peter Spiller

**Director, Strategic
Funding and Partnerships**

Geoff Drenkhahn

Chief of Staff

Paul Rathbone

**Chair of Gender Equity,
Diversity and Inclusion**

Professor Caroline Homer AO

**Head, Project Management,
Quality Assurance**

Mary-Ann Nicholas

**Executive General Manager,
Communication and Marketing**

Christine Elmer



Our Impact



Burmese students pictured at Pho Gyi monastic school, located in Myo Thit township, Magway region, Myanmar. Photo taken by Maung Aye Chan and used with permission.



364

peer-reviewed
publications



20+

countries
we work in



490+

scientists, public
health professionals
and support staff



28

research
working groups



\$10.7m (AUD)

in MRFF and NHMRC
grants and fellowships



\$74.8m (AUD)

spent on improving health
for a more equitable world



2022

Year at a Glance

FEBRUARY

Vaccine uptake in people who inject drugs (PWID)

A new study revealed around 50 per cent of PWID are hesitant to receive the COVID-19 vaccine due to concerns relating to vaccine safety and side effects.

“ Our malaria research identifies processes in the parasites that are essential for their survival. The more we understand about those processes, the better position we’re in to develop new treatments to block those processes.”

Associate Professor Paul Gilson, Co-Head, Malaria Virulence and Drug Discovery Group, Burnet Institute



MARCH

New malaria treatments essential as drug resistance grows

New Burnet-led research is helping to develop new drugs to combat malaria, which is becoming resistant to existing drugs.

Burnet joins Wellcome Leap Breakthrough Network

Network membership will strengthen Burnet's capacity to accelerate its research and translation to solutions through faster access to funding and by harnessing global expertise.

New global guidelines to manage childhood TB

Burnet's Professor Steve Graham played a key role in the development of new global guidelines for the management of tuberculosis in children and adolescents.

A case for companionship in labour

A new study identifies barriers and enablers to companionship during labour and birth, and recommends a framework to facilitate the practice in Papua New Guinea health facilities.

MAY

Reconciliation Action Plan launch

Burnet took a significant step in support of Aboriginal and Torres Strait Islander self-determination and the strengthening of relationships with non-Indigenous peoples.

Burnet partners with Moderna

The partnership will enable the development of novel mRNA vaccines for a range of emerging and neglected infectious diseases to improve the health of communities globally.

Image (middle): Mother and child, East New Britain, PNG.
Photo taken by Simon Harsent and used with permission.



JULY

Burnet launches 2030 Strategy

Burnet 2030 focuses on growing our impact with a strong commitment to supporting our research programs, environment, and importantly, our people – the heart of Burnet.

AUGUST

Proof-of-Concept funding from BioCurate

Burnet, in collaboration with Monash Institute of Pharmaceutical Sciences, receives funding to develop next-generation human immunodeficiency virus (HIV) antivirals.

Modelling demonstrates benefit of masks against Omicron

Burnet modelling for the Victorian Government shows increased mask uptake in Victoria could reduce the duration of COVID-19 epidemic peaks and increase the rate of decline afterwards.

SEPTEMBER

Lactic acid can reduce women's risk of sexually transmitted infections.

Burnet-led research reveals a novel ability of lactic acid, which is produced by bacteria found in women with an optimal vaginal microbiome, to strengthen the junctions between cells in the female genital tract forming a physical barrier to harmful bacteria and viruses.

Image (left): Father and child in Kerevat, East New Britain, PNG. Photo taken by Simon Harsent and used with permission.



OCTOBER

Burnet awarded over AUD\$9.2 million in funding

Five projects across malaria, HIV, hepatitis C, and reducing maternal and newborn deaths receive National Health and Medical Research Council (NHMRC) Investigator grants.

NOVEMBER

First global strategic guidelines for pre-eclampsia

Burnet researchers led the development of Target Product Profiles (TPPs) for medicines to prevent and treat pre-eclampsia – one of the leading causes of maternal and perinatal deaths globally.

Social media tool informs COVID-19 response

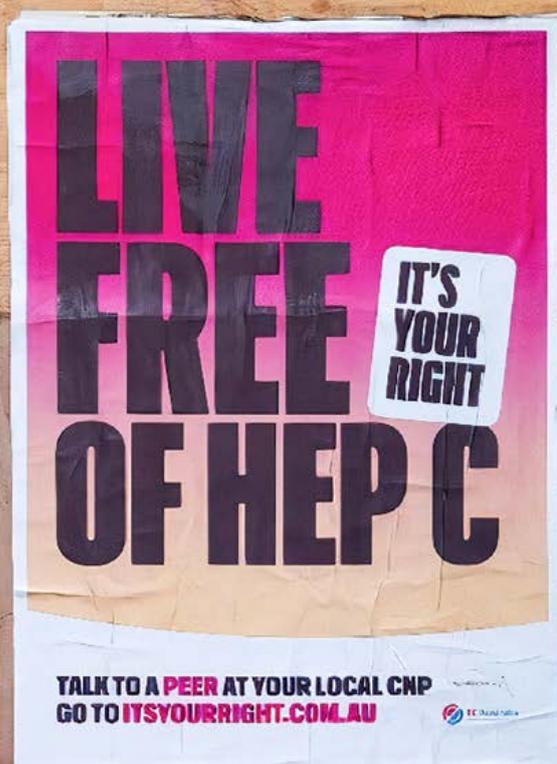
After analysing over 500,000 social media posts, TIGER C19 examines local COVID-19 related issues of current interest to help inform public health responses to the pandemic.

“

It's the first time we've looked nearly a decade ahead – that says a lot about where we are as an institution. In the world of global health where there are complex problems, technical problems that intersect with poverty, you have to look long term.”

Professor Brendan Crabb AC, Burnet Institute Director and CEO on the launch of Burnet 2030 Strategy

How we are working towards a future where diseases are eliminated



The Disease Elimination program is a coordinated, cross-disciplinary response to eliminate public health threats using a diverse approach across treatment and prevention, harm reduction in key populations at risk, vaccine and drug development, and diagnostics.

New insights into the RTS,S vaccine bring us closer to better malaria protection

The RTS,S vaccine is the only malaria vaccine recommended by the World Health Organization for children living in regions with moderate to high transmission of *Plasmodium falciparum* malaria. Previous Burnet research established that antibodies produced in the blood can ‘spray paint’ malaria parasites so that immune cells will recognise them and clear them from the body. The new analysis found that the ability of the vaccine – which only offers 30 to 50 per cent protection – to generate this protective immune response was relatively modest. It also found that children who have had a great deal of exposure to malaria had a lower response to the vaccine.

→ IMPACT

This study identified challenges for the RTS,S vaccine including waning immunity and previous exposure to malaria among children. These findings provide clues on how to refine or build on the RTS,S vaccine to better generate protective responses, and provide better protection from malaria.

A new public health campaign to increase hepatitis C testing and treatment

The goal of the ‘It’s Your Right’ campaign is to eliminate hepatitis C in people who inject drugs. Of the 120,000 Australians estimated to be living with chronic hepatitis C, people who inject drugs remain a priority community group for testing and treatment, along with prisoners, and Aboriginal and Torres Strait Islander peoples. Barriers to testing and treatment include discrimination and stigma, and the disruption caused by the COVID-19 pandemic. The campaign uses street advertising, social media, and a dedicated website to raise awareness about new, simple, and effective treatments, and encourages people who inject drugs to connect with their local peer organisation.

→ IMPACT

‘It’s Your Right’ is about empowering people who inject drugs to raise awareness and build connections with services that work closely with community to promote the benefits of the hepatitis C cures and achieve the World Health Organization’s 2030 elimination targets.

Stopping overdose safely in low- to middle-income countries

A Burnet Institute study, conducted in partnership with the World Health Organization and the United Nations Office on Drugs and Crime, showed the feasibility and effectiveness of the Stop Overdose Safely (S-O-S) program in Kazakhstan, Kyrgyzstan, Tajikistan and Ukraine – low- to upper-middle-income countries that have varying policies and practices on drug law enforcement and treatment. The S-O-S program involves training potential witnesses of overdose to recognise overdose signs and symptoms, effective responses including the use of naloxone, a medicine that temporarily reverses opioid overdoses. The study demonstrated successful implementation of the program in a range of settings, and the successful use of the program-issued naloxone at around 90 per cent of witnessed opioid overdoses.

→ IMPACT

The study suggests that implementing S-O-S training projects in low- and middle-income countries is feasible and can lead to naloxone use at witnessed overdoses, in line with expected targets. Further rollout of the S-O-S program in low- and middle-income countries will follow this important study.



204 peer-reviewed publications





How we are increasing health system capacities across our region

The Health Security and Pandemic Preparedness program addresses public health threats in our region, including tuberculosis, vector-borne pathogens and COVID-19, through strengthening core public health system capacities required to prepare for, and respond to, infectious disease threats.



77

peer-reviewed publications

STRIVE PNG: Stronger surveillance for vector-borne pathogens

Through piloting a real-time integrated febrile illness sentinel surveillance and response system, the STRIVE PNG project is generating evidence to enable the implementation of co-developed rapid-response strategies for surveillance of malaria and other vector-borne diseases (VBDs) in Papua New Guinea. At the same time, strengthening capacity for implementation research and the development of policy options to safeguard Papua New Guinea against VBDs. Key achievements in 2022 included the detection of a malaria outbreak in Chimbu province through the STRIVE-Tupaia Sentinel Site Surveillance System, enabling a coordinated response; ongoing insecticide resistance monitoring and vector surveillance activities to strengthen provincial capacity for routine monitoring; and the co-development of the PNG Molecular Testing Framework, led by the National Malaria Control Program and the Molecular Hub in Port Moresby.



→ IMPACT

Working closely with facility, provincial and national partners to identify molecular markers of artemisinin drug resistance in malaria parasites and insecticide resistance in the Aedes mosquito, which spreads dengue fever, STRIVE PNG has strengthened VBD surveillance across eight provinces, and supported six institutions to share resources and maximise investments, initiating a path to sustainability.

New global guidelines to manage childhood TB

Burnet Institute Senior Research Fellow, Professor Steve Graham played a key role in the development of new World Health Organization guidelines for the management of tuberculosis (TB) in children and adolescents. The new guidelines address gaps in case detection and the provision of preventive treatment by recommending a decentralised approach to diagnosis, so that children could be assessed by trained healthcare workers instead of being required to see a paediatric expert in a tertiary hospital. TB is a major cause of childhood and adolescent morbidity and mortality with an estimated 1.5 million new cases globally each year and more than 250,000 deaths.

→ IMPACT

The guidelines provide new recommendations for a shorter regimen of first-line drugs for non-severe forms of drug-susceptible TB, and for the use of two new second-line drugs for drug-resistant TB. The use of shorter, all-oral regimens for drug-resistant TB would obviate the need for injectables, which often caused permanent hearing loss in children.

TIGER C19

TIGER C19, the **T**imely **I**ntegration of user-**G**enerated **R**esponses to COVID-19, uses a sophisticated data analytics tool to search for pertinent keywords on social media to track how public opinion about COVID-19 in Australia has changed over the course of the pandemic, and helped inform public health responses. In 2022, TIGER C19 passed a significant milestone in having analysed more than 500,000 social media posts on Twitter and Reddit since the start of the pandemic. The project is currently searching for posts from Australia and concentrating on COVID-19 but has the potential to explore a wide range of public health themes both in Australia and overseas.

→ IMPACT

The project has informed the COVID-19 response by providing valuable insights into attitudes and opinions on a broad range of issues that are relevant at the time of collection – from vaccination and quarantine, to lockdowns, masks, isolation, protests, and long COVID.



How we are making an impact on the lives of mothers, children and adolescents



The Maternal, Child and Adolescent Health program aims to generate new knowledge about key contributors to poor health outcomes for women, children and young people particularly in resource-poor and high-risk communities in our region.



74

peer-reviewed publications

Responding to the high burden of poor mental health in children and adolescents

Burnet led a multi-country study in East Asia and the Pacific to support governments and non-government organisations to improve mental health and wellbeing of children and adolescents. In collaboration with UNICEF, Burnet developed the first regional framework for mental health, defining the actions needed to respond to mental health conditions, prevent poor mental health, and promote psychosocial wellbeing.

→ IMPACT

The project worked with more than 150 stakeholders from health, education, social welfare, and justice sectors in Papua New Guinea, Malaysia, Thailand and the Philippines, and led to recommendations to ensure effective implementation of essential mental health care and support.



A longitudinal study to understand the impacts of menstrual health on girls' lives

The Adolescent Menstrual Health Experiences and Health Cohort (AMEHC) study aims to understand adolescent girls' changing menstrual health experiences and needs throughout their adolescent years, and test the impacts of menstrual health on girls' lives. The study will quantify the effects of early menstrual experiences and sustained unmet menstrual health needs in adolescence on education, physical health, mental health, and sexual and reproductive health outcomes. While qualitative studies have described consequences of unmet menstrual health needs for health and education, studies have yet to document the extent to which menstrual health impacts these outcomes to prompt commensurate and sustained investment. A longitudinal study allows researchers to explore the relationships between early life events and later outcomes, and to understand the timing of experiences to draw stronger causal inferences about the impacts of menstrual health.

→ IMPACT

The AMEHC study is following a cohort of 2,000 adolescent girls from 12 years of age in Bangladesh, around the time of menarche, through to later adolescence. Yearly surveys will document changing menstrual health experiences and needs, tracking their impacts on girls' lives.

New insights into medicines for pre-eclampsia

Burnet Institute researchers have led the development of the first global strategic guidelines, called target product profiles (TPPs), for medicines to prevent and treat pre-eclampsia – a hypertensive disorder in pregnancy that is one of the leading causes of maternal deaths, stillbirth, and preterm birth globally. Developed through a process of consensus involving interviews, surveys, and feedback with global stakeholders, the new TPPs describe in detail what new medicines for pre-eclampsia need to achieve to meet the needs of women and their healthcare professionals. Of 300,000 global maternal deaths annually, 14 per cent are due to hypertensive disorders, with pre-eclampsia the most common. The vast majority of these deaths happen in low- and middle-income countries where access to medicines and quality of care may be limited.

→ IMPACT

The TPPs will help to address a longstanding dearth of innovation, and research and development of new medicines for mothers, particularly for pregnancy-related conditions, and will be used by pharmaceutical companies to inform the development of new drugs and products, and to assist funding agencies in their decision-making.



**How we enhance
translation into
tangible benefits for
the global community**

Burnet is committed to closing the gap in health equity with practical solutions for unmet health needs. Through collaborations and partnerships, as well as our established systems, resources and processes, we can utilise existing health clinicians and public health networks to support product development and enhance translation into effective products, putting them in the hands of those who need them most.

Burnet Institute partners with Moderna to develop novel mRNA vaccines

Improving the health of communities globally is the goal of Burnet Institute's partnership with mRNA vaccine manufacturer Moderna through its mRNA Access program. The COVID-19 pandemic has underscored the important role of mRNA vaccines, and innovative scientific thinking is now needed to tackle many of the other high-burden infectious diseases including malaria, which is responsible for the death of half a million people, mostly children, each year. Through mRNA Access, Moderna will provide expertise in designing mRNA vaccines for Burnet's validated novel candidates in malaria, SARS-CoV-2 and hepatitis C. The Burnet Vaccine Initiative (BVI) research team will provide vaccine antigens to be modified and optimised by Moderna and returned to the Institute as mRNA candidates ready to test in pre-clinical models. Should the results prove promising, Moderna will consider extending the partnership to help progress these candidates through clinical trials. The BVI represents a unique portfolio of carefully selected, evidence-based and rationally engineered antigens that have been designed to generate broad immunity known to be protective in humans, and builds on over two decades of research and development at Burnet. BVI's discovery science includes structural biology, candidate discovery and optimisation, novel immunogenicity assays, genomics, and clinical and population studies in Australia and internationally.

Burnet Diagnostics Initiative

Burnet Diagnostics Initiative (BDI) is a commitment by Burnet Institute to develop the systems, resources and processes to support diagnostics product development and enhance translation of its point-of-care diagnostics research into practical health solutions. The BDI is building capacity in Melbourne for its internal research and for engagement with the in vitro diagnostics industry through strategic partnerships. Diagnostics play a critical role in increasing access to quality treatment for those in the developing world, particularly for infectious diseases, such as hepatitis and HIV. The majority of people living in rural and remote areas of the developing world have limited access to testing. There is a clear need for the development of simple, low-cost and accurate tests, essential to improving the health of marginalised communities. The BDI is filling this gap for rapid point-of-care diagnostics that can be operated in the field without the expensive infrastructure of traditional diagnostics. The BDI will translate existing and new technologies to practical health solutions and products, and maximise their accessibility to populations in need, especially in the Asia-Pacific region. Burnet has an extensive track record in the development of immunoassay products focused on unmet needs, including VISITECT® CD4 (Advanced Disease) currently being rolled out worldwide by Accubio – endorsed by the Global Fund and WHO pre-qualified in September 2020.

moderna

“ The BDI implemented systems and processes that enhance the translation of new technologies into practical health solutions, so that our products can reach populations most in need.”

Jennifer Barnes, Burnet Diagnostics Initiative (BDI)

Key Publications

Three institute-wide interdisciplinary thematic health programs represent the breadth of our technical skill base and foster a collaborative approach to tackling some of the most challenging global health issues. Here we provide a sample of more than 360 publications from 2022.



364

peer-reviewed publications



212

Burnet authors appearing on these publications



Disease Elimination

Donnison T, McGregor J,* Chinnakannan S, Hutchings C, Center RJ, Poumbourios P, Klenerman P, Drummer HE, Barnes E**

A pan-genotype hepatitis C virus viral vector vaccine generates T-cells and neutralising antibodies in mice.

Hepatology, 76(4), 1190-1202

Interpretation: These data are an important step forward for the development of a pan-genotype HCV vaccine to elicit T-cells and neutralising antibodies for future assessment in humans.

*Joint first authors **Joint last authors

Scott N, Palmer A, Tidhar T, Stoové M, Sacks-Davis R, Doyle JS, Pedrana A, Thompson AJ, Wilson DP, Hellard M

Assessment of the cost-effectiveness of Australia's risk sharing agreement for direct-acting antiviral treatments for hepatitis C: a modelling study.

The Lancet Regional Health – Western Pacific, 18, 100316

Interpretation: Five years of unrestricted access to DAAs in Australia has led to significant health benefits and is likely to become cost-saving from a societal perspective by 2022.

Traeger MW, Guy R, Asselin J, Patel P, Carter A, Wright EJ, Grulich A, McManus H, Fairley CK, Chow EPF, McNulty A, Finlayson R, Bell C, Owen L, Marshall L, Russell D, O'Donnell D, Donovan B, Hellard ME, Stoové MA; Australian Collaboration for Coordinated Enhanced Sentinel Surveillance of Sexually Transmissible Infections and Blood Borne Viruses (ACCESS) Study Group.

Real-world trends in incidence of bacterial sexually transmissible infections (STI) among gay and bisexual men using HIV pre-exposure prophylaxis (PrEP) in Australia following nationwide PrEP implementation: an analysis of sentinel surveillance data.

The Lancet Infectious Diseases, 22(8), 1231-1241

Interpretation: Chlamydia and gonorrhoea incidence among gay and bisexual men using PrEP were highest in the early months of PrEP implementation in Australia and stabilised at slightly lower rates thereafter following wider PrEP uptake. Lower prospective bacterial STI risk among people initiating PrEP in later years contributed to the observed trends in bacterial STI incidence. Widespread PrEP implementation can contribute to increased bacterial STI screening and detection.

Tavul L, Laman M, Howard C, Kotty B, Samuel A, Bjerum C, O'Brian K, Kumai S, Amuga M, Lorry L, Kerry Z, Kualawi M, Karl S, Makita L, John LN, Bieb S, Wangi J, Weil GJ, Goss CW, Tisch DJ, Pomat W, King CL, Robinson LJ

Safety and efficacy of mass drug administration with a single-dose triple-drug regimen of albendazole + diethylcarbamazine + ivermectin for lymphatic filariasis in Papua New Guinea: An open-label, cluster-randomised trial.

PLoS Neglected Tropical Diseases, 16(2), e0010096

Interpretation: IDA (ivermectin, diethylcarbamazine and albendazole) was well tolerated and more effective than DA (diethylcarbamazine and albendazole) for clearing microfilaria. Widespread use of this regimen could accelerate lymphatic filariasis elimination in PNG.

Wines BD, Kurtovic L, Trist HM, Esparon S, Lopez E, Chappin K, Chan LJ, Mordant FL, Lee WS, Gherardin NA, Patel SK, Hartley GE, Pymm P, Cooney JP, Beeson JG, Godfrey DI, Burrell LM, van Zelm MC, Wheatley AK, Chung AW, Tham WH, Subbarao K, Kent SJ, Hogarth PM

Fc engineered ACE2-Fc is a potent multifunctional agent targeting SARS-CoV-2.

Frontiers in Immunology, 13, 889372

Interpretation: This study engineered an antibody component fused with the SARS-CoV-2 receptor ACE2 and showed this protein was able to neutralise SARS-CoV-2 and enhance its elimination by immune mechanisms. This concept may also be potentially useful to target other pathogens.

Chan JA, Loughland JR, de la Parte L, Okano S, Ssewanyana I, Nalubega M, Nankya F, Musinguzi K, Rek J, Arinaitwe E, Tipping P, Bourke P, Andrew D, Dooley N, SheelaNair A, Wines BD, Hogarth PM, Beeson JG, Greenhouse B, Dorsey G, Kanya M, Hartel G, Minigo G, Feeney M, Jagannathan P, Boyle MJ

Age-dependent changes in circulating Tfh cells influence development of functional malaria antibodies in children.

Nature Communications 2022, 13(1), 4159

Interpretation: This study analysed immune responses in children living in a high malaria transmission region of Uganda and found high antibody levels to malaria were associated with heightened activity of a type of T cell, T-follicular helper (Tfh) cells. This indicates a key role for these cells in development of immunity to malaria.

Health Security and Pandemic Preparedness

Bainomugisa A, Lavu E, Pandey S, Majumdar S, Banamu J, Coulter C, Marais B, Coin L, Graham S M, du Cros P

Evolution and spread of a highly drug resistant strain of *Mycobacterium tuberculosis* in Papua New Guinea.

BMC Infectious Diseases 2022, 437

Interpretation: The acquisition and evolution of drug resistance among the major clades of Beijing strain threaten the success of DR-TB treatment in PNG. With continued transmission of this strain in PNG, genotypic drug resistance surveillance using whole genome sequencing is essential for improved public health response to outbreaks. With occurrence of resistance to newer drugs such as bedaquiline, knowledge of full drug resistance profiles will be important for optimal treatment selection.

Farquhar R, Dori A, MacCana S, Tefuarani N, Lavu E, Barry A, Karl S, Makita L, Robinson L, Laman M

STRIVE PNG: using a partnership-based approach in implementation research to strengthen surveillance and health systems in Papua New Guinea.

Health Research Policy and Systems, 20(1), 35

Interpretation: Provides an overview of the conceptual framework and partnership tools used to adopt an explicit partnership-based approach to strengthen vector-borne disease surveillance across eight provinces in Papua New Guinea. By working with facility, provincial and national partners in this way, STRIVE has strengthened six PNG institutions enabling them to cross share resources and maximise investments, initiating a path to sustainability.

Hayward JA, Tachedjian M, Johnson A, Irving AT, Gordon TB, Cui J, Nicolas A, Smith I, Boyd V, Marsh GA, Baker ML, Wang LF, Tachedjian G

Unique evolution of antiviral tetherin in bats.

Journal of Virology, 96(20), e01152-22

Interpretation: These data suggest that bat tetherin plays a potentially broad and important role in the management of viral infections in bats.

Maternal, Child and Adolescent Health

Baird S, Ezeh A, Azzopardi P, Choonara S, Kleinert S, Sawyer S, Patton G, Viner R

Realising transformative change in adolescent health and wellbeing: a second Lancet Commission.

Lancet 2022, 400(10352), 545-547

Interpretation: The current UN Secretary-General has called on the world "to think for the long term, to deliver more for young people and succeeding generations, and to be better prepared for the challenges ahead". This Second Lancet Commission on Adolescent Health and Wellbeing seeks to ensure that today's adolescents have the means to address the unique challenges of their generation.

McDougall ARA, Hastie R, Goldstein M, Tuttle A, Tong S, Ammerdorffer A, Gülmezoglu AM, Vogel JP

Systematic evaluation of the pre-eclampsia drugs, dietary supplements and biologicals pipeline using target product profiles.

BMC Medicine 2022, 20(1), 393

Interpretation: This is a novel, evidence-informed approach to identifying promising candidates for pre-eclampsia prevention and treatment — a vital step in stimulating research and development of new medicines for pre-eclampsia suitable for real-world implementation.

Delgado-Diaz DJ, Jesaveluk B, Hayward JA, Tyssen D, Alisoltani A, Potgieter M, Bell L, Ross E, Iranzadeh A, Allali I, Dabee S, Barnabas S, Gamielidien H, Blackburn JM, Mulder N, Smith SB, Edwards VL, Burgener AD, Bekker LG, Ravel J, Passmore JS, Masson L, Hearps AC, Tachedjian G

Lactic acid from vaginal microbiota enhances cervicovaginal epithelial barrier integrity by promoting tight junction protein expression.

Microbiome, 10(1), 141

Interpretation: The findings reveal a novel ability of vaginal lactic acid to enhance genital epithelial barrier integrity that may help prevent invasion by sexually transmitted pathogens.

STUDYING AT BURNET

How we are supporting the next generation of scientists



18% increase in student intake

70

Students

47

PhD Students

9

Honours Students

14

Masters Students



A message from Dr Raffi Gugasyan

Chair of Education, Burnet Institute

Burnet prides itself on creating an environment with the resources and expertise to help students thrive. In 2022, our students furthered their research skills, while supporting each other along the way.

Our student representatives Brendan Harney and Brianna Jesaveluk designed and hosted the Institute's Student Information Sessions, attracting prospective students from across the country.

Students also showcased their work at the annual Student Symposium with keynote speakers Associate Professor Jen Martin from The University of Melbourne, and Dr Dinesh Palipana OAM, doctor, lawyer, disability advocate and researcher.

Led by our student representatives, the event attracted local sponsorship and launched a newly established prize – the Honours Professional Development Awards. The prize was established to award honours students additional funding for conference attendance and other professional development activities.

I am very proud of our student community, who consistently look out for each other, and demonstrate incredible resilience and determination. I congratulate our students, and wish them every success in their future endeavours.

Congratulations to our 2022 PhD awardees:



- Michael Curtis
- Bridget Draper
- Caitlin Douglass
- Desmond Gul
- Penny Hill
- Felicia Schlotthauer
- Chris Seaman
- Michael Traeger
- Alyce Wilson
- Michelle Wong
- Yinzong Xiao

83% increase in
PhD awardees

“

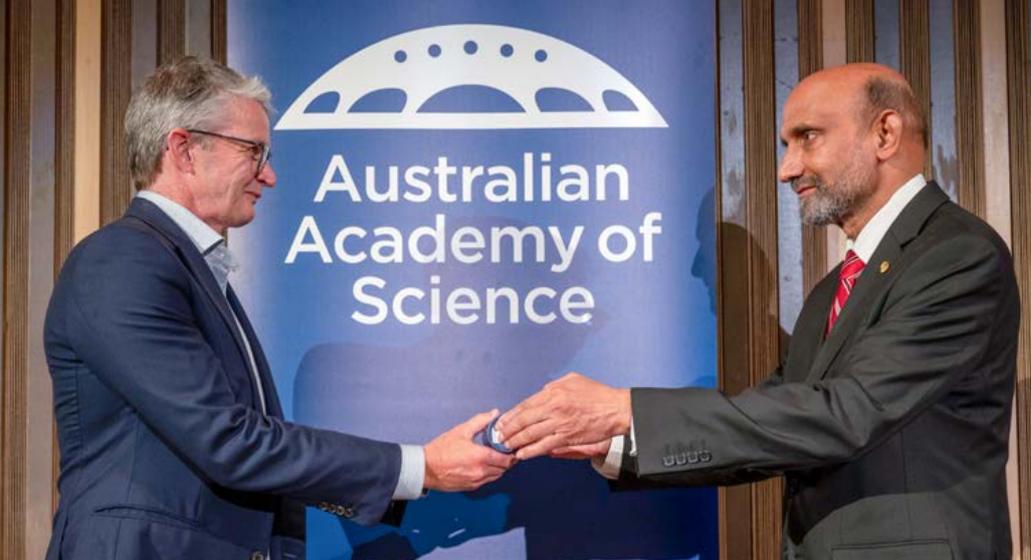
I find the culture of Burnet extremely friendly and approachable. People are really happy to help you. My supervisors have made me feel like a part of the team, so I'm not excluded from discussions about research other than my own. They don't just oversee your research, they really mentor you in becoming a professional [in your field].”

Callum Diamond-Smith, Honours Student

Congratulations

We are very proud of the outstanding work delivered by our Burnet team in 2022. Our staff and students remain dedicated to achieving our purpose to create and translate knowledge into better health so no-one is left behind.





Dr Alisa Pedrana
Gust-McKenzie
Medallist

Awards

- **CSL Centenary Fellowship:**
Dr Michelle Boyle
- **Fulbright Postgraduate Scholarship:** Michael Traeger
- **Gust-McKenzie Award:**
Dr Alisa Pedrana
- **IAS/MSD Prize for Research in HIV Prevention:** Dr Rachel Sacks-Davis and Professor Mark Stoové
- **VCCC Alliance's Tony Burgess medallist:** Associate Professor Jessica Howell (pictured on page 28)

Travel Awards

- **Crockett-Murphy Travel Award:**
Pele Melepia and Akisa Kawe
- **Domestic Travel Award:**
Dr Hayley Bullen
- **Dora Lush Academic Excellence Award:** Ashleigh Stewart and Dr Win Han Oo
- **The Evelyn Lavu Travel Scholarship:**
Jennifer Kopania Banamu and Nomin-Dora Tenakanai
- **Gender, Equity, Diversity and Inclusion Travel Fellowship:**
Dr Rebecca Winter
- **Geoffrey Stewardson Travel Fellowship:** Brendan Harney
- **Harold Mitchell Foundation Postdoctoral Travel Fellowship:**
Dr Marie Habito and Dr Liriye Kurtovic
- **Harold Mitchell Foundation Postgraduate Travel Fellowship:**
Dr Alyce Wilson
- **Hon Geoffrey Connard Travel Fellowship:** Sophia Schroeder
- **Jim and Margaret Beever Fellowship:** Dr Fiona Angrisano
- **Margaret Harrison Parental Leave Grant:** Dr Jo-Anne Chan
- **Miller Foundation Biomedical Research:** Dr Grace Androga
- **Miller Foundation Public Health:**
Dr Annie McDougall
- **Pauline Speedy Biomedical Research Fellowship:**
Brianna Jesaveluk

Appointments

Burnet Institute Director and CEO, Professor Brendan Crabb AC was formally admitted as a Fellow of the Australian Academy of Science.

Professor Crabb was elected to the Academy in 2021 for several significant discoveries he has made about malaria but, together with other Fellows elected in 2020 and 2021, was not able to be formally admitted until 2022.



How we are making a formal commitment to reconciliation at Burnet

In May 2022, we launched our first Reflect Reconciliation Action Plan (RAP) with full endorsement from Reconciliation Australia.

Our RAP is our formal commitment to develop and implement an institute-wide approach to research that ensures our work is conducted alongside Aboriginal and Torres Strait Islander peoples (hereafter referred to as Aboriginal) in a mutually beneficial manner, respecting culture, language, country and people to progress reconciliation in healthcare. We are also committed to maintaining a workplace culture that encourages staff to engage with Aboriginal culture and history in this country, from language to business, so that current and future Aboriginal researchers feel welcome and empowered in our workplace.



Our Progress

Over the past year, Burnet's RAP committee has:

- Implemented a new procurement policy that promotes the purchase of products and services from Aboriginal businesses or organisations, supported by a membership to Supply Nation – a national database of Aboriginal owned and operated businesses.
- Placed Acknowledgement of Country plaques at all entrances to our workspaces.
- Named our meeting spaces with Boon Wurrung words, in consultation with Aunty Fay Muir from Boon Wurrung Foundation.
- Encouraged staff and students to attend various reconciliation events and celebrations of Aboriginal culture.
- Developed a business case to increase the employment of and provide career development opportunities to Aboriginal people, that has been endorsed and funded by the Institute.
- Engaged The Bunurong Land and Sea Council/Boon Wurrung Foundation to perform Welcome to Country ceremonies at important Institute events.
- Partnered with the Bulgarr Ngaru Medical Aboriginal Corporation through the Eliminate Hepatitis C Australia Partnership.
- Received funding to develop a National Aboriginal Hepatitis C Campaign in partnership with Aboriginal Community Controlled Health Organisations (ACCHOs).
- Funded a RAP committee coordinator position at the Institute.

For more information on all Burnet's RAP activities, please refer to our RAP progress report at burnet.edu.au.



Bunjil The Creator, 2021

By Stacey

About the Artwork

Bunjil is the creator of the Kulin nations. He takes the shape of a wedge-tailed eagle. Any guests of the Kulin nations have to follow two rules: to obey the laws of Bunjil, and to not harm the children or land of Bunjil.

About the Artist

Stacey is a Taungurung/Boon Wurrung woman with traditional connections to the Melbourne region.



THANK YOU FOR YOUR SUPPORT

Gifts of all shapes and sizes play a significant role at Burnet



Major Gifts

Many Burnet projects, vital equipment, laboratory fit-outs, and awards and fellowships have been supported by very generous gifts from supporters. Here are just a couple.

The Drakensberg Trust

The Drakensberg Trust, named after the mountains of its founder's homeland, was established in 1978 in Australia by Edward George Brownstein (1933–2014). In 2022, the trust very generously pledged to support two key projects within Burnet's Australian NGO Cooperation Program, over three years. These projects are improving the lives of children and teenagers in countries where a healthy start to life can't be guaranteed.

- **Zero Dose:** Identifying under-immunised children at two years of age, and strengthening service delivery and community uptake of routine immunisation in East New Britain, Papua New Guinea.
- **Healthy Minds Healthy Futures:** Addressing adolescent mental health and wellbeing in Myanmar.

"Burnet's efficient management, expertise working with vulnerable communities and their commitment to primary healthcare mean small funds can make a big difference. It's been an incredible privilege for the family to be able to continue the philanthropic work that had been such an important part of dad's life."

Dr Gerard Brownstein, son of Edward (Eddie) Brownstein and manager of the Drakensberg Trust

Dr Jerry Koliha and Ms Marlene Krelle

With a background in science themselves, Marlene and Jerry have been staunch supporters of Burnet Institute for many years. Initially they supported a research project to strengthen primary healthcare for Aboriginal and Torres Strait Islander adolescents – as it is something close to Jerry's heart. More recently, they have thrown their support behind Burnet's COVID-19 research to achieve a universal vaccine.



"Marlene and I are excited to hear about the progress on Burnet's research on the COVID-19 Spike Protein and would like to convey our appreciation for the hard and inspired work by Professor Heidi Drummer and the team. We are happy to have been a part of this research, which promises to make a substantial difference to the treatment of the future variants of the coronavirus."

Dr Jerry Koliha



Thank you for your support

THANK YOU FOR YOUR SUPPORT

Regular Giving

A huge thank you to our 408 Research Action Partners who give to us each month throughout the year.

Your continuous support helps us create and translate knowledge into better health, so no-one is left behind.



Find out how you can support Burnet Institute's work by contacting us on (03) 8506 2401, email giving@burnet.edu.au, or visit our website burnet.edu.au.

Fundraising Appeals

Thank you to everyone who supported our two major public fundraising appeals in 2022.

Joining the fight to achieve global malaria elimination

In our major appeal for 2022 many incredibly generous donors supported our malaria research, contributing to achieving global malaria elimination targets and saving lives.

Malaria is one of the leading causes of severe illness and death globally. An estimated 2.5 billion people are at risk of malaria, with young children and pregnant women most affected.

Many great strides have been made in the global race to eliminate malaria, some of them right here in Burnet laboratories. But in the early years of COVID-19, the race to eliminate malaria stalled and illness, injury and death from malaria worsened.

"Thanks to your support, we will forge ahead with key research projects that will contribute significantly to the elimination of malaria – new vaccines for prevention, improved diagnostics and surveillance for detection, and better drugs for treatment."

Professor James Beeson, Head of Malaria Immunity and Vaccines Laboratory, Burnet Institute (pictured below)



"My parents gave to Burnet for many years. My dad has passed away now. My mum is 91 and still going strong. Like myself, my parents saw first-hand that malaria affects the whole family's ability to thrive in these poorer countries. It was this that drove their giving, and it's what motivates me as well. I'm very proud of the support my parents have given to infectious diseases research at Burnet Institute, and I'm pleased I can carry on in their footsteps."

Caroline Jacoby, Burnet supporter (pictured below with a Turkana girl in Northern Uganda)

Sending more babies home, where they should be

In Australia, six babies are stillborn every day, whereas in India there are more than 900.

Professor Joshua Vogel came across innovative research conducted in Australia and New Zealand, which found that by altering maternal sleep behaviour in late pregnancy, nearly 6 per cent of stillbirths could be avoided. He proposed testing safe sleeping advice in India and Bangladesh to see if it had the potential to reduce the horrific rates of stillbirths in low- and middle-income countries.

"Thanks to everyone who supported this project, myself and my colleagues have been able to mature plans for this study in India and Bangladesh, and it will go ahead in 2023, as scheduled."

Professor Joshua Vogel, Co-Head Global Women's and Newborn's Health Group, Burnet Institute



Gifts in Wills

Leaving a philanthropic gift in your will can provide a lasting legacy to help people in need. We hope those who were close to the thoughtful benefactors who left a gift in their will to Burnet Institute take comfort knowing their legacy lives on through our work.

We thank the following estates for their distribution to the Institute during 2022:

- Mr David Bird
- Mr Bruce Carroll
- Mr Sidney Forsey
- Ms Wilma Keir
- Ms Elizabeth Law-Smith
- Ms Patricia Richards
- Mr Jelke Ringersma

We thank the following Trusts in Perpetuity that distributed in 2022:

- Joyce Adelaide Healey Charitable Trust Fund
- Margo, Bonnie and Emma Perpetual Memorial Trust
- The Peter Leith Riddell Memorial
- The William & Georgena Bradshaw Charitable Trust
- Thomas John Beresford Will Trust

Endowment Funds

The Burnet Institute Endowment Fund was established for donors who wished to support the long-term objectives of Burnet through named sub-funds.

We would like to thank:

- Alabaster Box of Precious Ointment
- Alastair Lucas Endowment Fund
- Geoffrey J Stewardson Fund
- Margaret & Jim Beever Fellowship
- The James O'Keefe Fund for PNG

“

I love the Institute's focus on helping vulnerable communities in Australia and overseas - particularly improving the health of children and young people in disadvantaged or 'at risk' circumstances. It is so important to help children and young people, as they are the future.”

Ms Patricia (Trish) Richards, 2019



Trusts and Foundations

Thank you to the charitable trusts and foundations that support us:

- Baker Foundation
- CASS Foundation Ltd
- Collie Foundation (managed by Equity Trustees)
- D & X Williamson Family Charitable Fund
- Drakensberg Trust
- Eirene Lucas Foundation
- Finkel Foundation
- The Hon Geoffrey Connard AM Travelling Scholarship
- Gilead Sciences, Australia and New Zealand
- Guthrie Family Charitable Trust
- Gwenneth Nancy Head Foundation
- Estate of GWA Griffiths
- Harold Mitchell Foundation
- The Harold & Cora Brennen Benevolent Trust (managed by Equity Trustees)
- Harper Family Endowment (Lush/Harper Family)
- Harry Secomb Foundation
- HMA Foundation Pty Ltd
- Jasper Foundation
- Joe White Bequest
- John Burge Trust (managed by State Trustees)
- Margaret Walkom Bequest
- Margaret and John Crutch Bequest
- Marshall Fund (a charitable fund account of Lord Mayor's Charitable Foundation)
- The Miller Foundation
- Nancy E Pendergast Charitable Trust Fund (managed Perpetual Trustees)
- Naylor Stewart Foundation
- Percy Baxter Charitable Trust (managed Perpetual Trustees)
- The Peter Leith Riddell Memorial (managed by Centenary Foundation)
- Perpetual Foundation - Jenny and Michael's Sharing Hope Endowment
- Ruby C Thomas and Ronald R Fraser (State Trustees Australia Foundation)
- Upotipotpon Foundation
- Will and Dorothy Bailey Charitable Fund
- William Angliss (Victoria) Charitable Fund
- W P Brown Family (Elizabeth & Nan Brown)



Mother and child at a mobile health clinic in Delroy, Dadul ward, East New Britain, PNG. Photo taken by Simon Harsent and used with permission.

Thanks to every single one of you

Every gift makes a difference here at Burnet. So, to all those who opted to be acknowledged by name, we thank you. To the many more of you who chose to remain anonymous, we thank you too.



A

- D Anderson & K Eyre
- M R Andrew
- E Arnold

B

- M Barclay
- G Bedson
- B Bell
- G Bhashki
- A Bickle
- A Boatman
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- N Bomford
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- N P Brown
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C

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- D Frank
- C Furneaux

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— C Homer
— P Homer
— P Hone
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— D Sides
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— G Smitham
— J So
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— D Williams
— K Willsher
— S Wilson
— D Witham
— J Woodside
— T Wootton

Z

— R Zeidler

Financial Summary

In 2022, the Institute spent AUD\$74.8 million on improving health in Australia and globally for a more equitable world.

BASIS OF PREPARATION

The Statements of Financial Position and Consolidated Statement of Profit or Loss in this section were extracted from the audited general purpose financial statements of the consolidated operations of Burnet Institute. The summary financial information does not include all the information and notes normally included in a statutory financial report.

The statutory financial report (from which the summary financial information has been extracted) was prepared in accordance with Australian Accounting Standards adopted by the Australian Accounting Standards Board (AASB), the Australian Council for International Development Code of Conduct, and the Australian Charities and Not-for-Profit Commission Regulations.

OPERATING RESULT AND STATE OF AFFAIRS

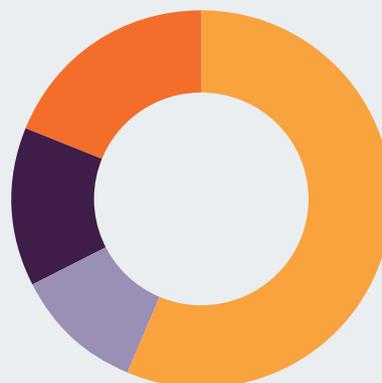
The Group recorded a deficit in the current year of \$25,463,434 (2021: surplus \$262,811,225). The Group's operating performance for the year was significantly impacted by the performance of the Investment Fund, which had a negative net return of \$10.6 million. This was represented by a \$21.4 million write-down on the value of its Investments portfolio (fair value mark to market movement at 31 December 2022) and offset by \$10.8 million from interest and dividends received during the year. The Board-endorsed investment strategy (which is managed by Morgan Stanley) aims to achieve returns of CPI plus 4% over the medium to long term (5-7 years). Investment decisions are overseen by the Investment Committee and strategies are continually evaluated.

Aside from the performance of the Investment Fund, the Institute's performance was favourable compared to budget. Depreciation and amortisation decreased relative to the prior year, which amounted to \$4,617,174 (2021: \$5,669,518).

Other than for Biopoint Hong Kong Ltd, income tax is not applicable.

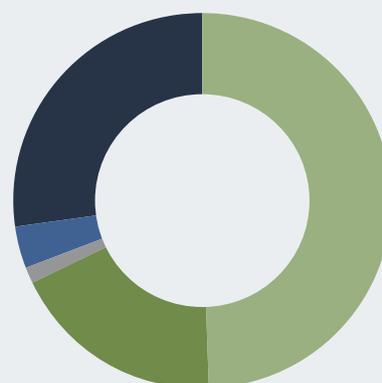
There were no significant changes in the Group's State of Affairs that occurred during the calendar year, other than those referred to elsewhere in this report.

Income 2022



- Competitive Grants/Contracts: **56.4%**
- Operational Infrastructure: **11.3%**
- Fundraising: **13.5%**
- Investments: **18.8%**

Expenditure 2022



- Research/Health Programs: **49.5%**
- Facilities & Administration: **18.4%**
- Business Development: **3.6%**
- Fundraising: **1.5%**
- Depreciation/other: **27%**

For a full copy of the 2022 audited general purpose Financial Report please contact Burnet Institute.



(03) 9282 2111



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Consolidated Statement of Profit or Loss and Other Comprehensive Income

(For the year ended 31 December)

	Note	2022 \$'000	2021 \$'000
Revenue from continuing operations	3	57,377	88,944
Other income	3	13,320	323,655
Total Revenue and Other Income		70,697	412,599
Research and development laboratory consumables expenses		(2,527)	(6,998)
Personnel expenses	4	(34,470)	(106,975)
Depreciation and amortisation expenses	11	(1,018)	(2,070)
Depreciation and amortisation expenses – right of use asset		(3,599)	(3,599)
Research and development non-laboratory expenses		(12,972)	(9,499)
Facilities and laboratory support		(11,066)	(9,088)
Fair Value movement on investments (mark to market)	9	(21,456)	6,080
Other administration		(7,276)	(10,060)
Interest expense		(1,841)	(1,853)
Net (Deficit)/Surplus for the Year		(25,528)	268,537
Share of (loss)/gain in associate		–	(15)
Net results of Equity Accounting		–	(15)
(Deficit)/surplus before income tax		(25,528)	268,522
Income tax expense		–	(5,454)
(Deficit)/Surplus After Income Tax		(25,528)	263,068
(Deficit)/Surplus After Income Tax Attributable to:			
Members of the Company		(25,356)	283,629
Non-controlling interests		(172)	(20,561)
(Deficit)/Surplus After Income Tax		(25,528)	263,068
Other comprehensive income			
Foreign currency translation differences – foreign operations		65	(256)
Total Comprehensive (Deficit)/Surplus for the Period		(25,463)	262,812
Total Comprehensive (Deficit)/Surplus Attributable to:			
Members of the Company		(25,477)	283,427
Non-controlling interests		14	(20,615)
Total Comprehensive (Deficit)/Surplus for the Period		(25,463)	262,812

The Consolidated Statement of Comprehensive Income is to be read in conjunction with the Notes to the Consolidated Financial Statements.

The Group's total comprehensive deficit for the period includes the International Programs deficit of \$1,286,000 (2021: deficit of \$1,105,000) and Domestic and other programs deficit of \$24,177,000 (2021: surplus of \$263,917,000). Refer to the Group's International Activities Operating Statement for a full copy of the 2022 audited Statement of Profit or Loss and Other Comprehensive Income.

Consolidated Statement of Financial Position

(As at 31 December)

	Note	2022 \$'000	2021 \$'000
Current Assets			
Cash and cash equivalents		7,954	7,999
Trade and other receivables	6	4,968	8,024
Other assets	7	439	678
Lease receivables	8	554	508
Financial assets	9	308,493	332,288
Total Current Assets		322,408	349,497
Non-Current Assets			
Lease receivables	8	4,462	5,016
Financial assets	9	52,579	51,024
Right of use asset	10	43,191	46,790
Property, plant and equipment	11	4,052	4,285
Total Non-Current Assets		104,284	107,115
Total Assets		426,692	456,612
Current Liabilities			
Trade and other payables		1,901	2,820
Current tax liabilities	12	9	145
Lease liabilities and borrowings	13	2,355	2,228
Provisions	14	5,519	5,322
Deferred income	15	29,806	30,340
Total Current Liabilities		39,590	40,855
Non-Current Liabilities			
Lease liabilities and borrowings	13	45,944	48,297
Provisions	14	807	986
Right of use liability	16	4,619	5,279
Total Non-Current Liabilities		51,370	54,562
Total Liabilities		90,960	95,417
Net Assets		335,732	361,195
Equity			
Retained profit/(deficit)		337,112	362,468
Foreign Currency Translation Reserve		12	(53)
Non-controlling interests		(1,392)	(1,220)
Total Equity		335,732	361,195

The Consolidated Statement of Financial Position is to be read in conjunction with the Notes to the Consolidated Financial Statements.

The Macfarlane Burnet Institute for Medical Research and Public Health Limited is a signatory to the Australian Council for International Development (ACFID) Code of Conduct. The Code requires members to meet high standards of corporate governance, public accountability and financial management.

Burnet Institute International Development Activities Operating Statement

(For the year ended 31 December)

	2022 \$'000	2021 \$'000
Revenue		
Donations and gifts – monetary	451	194
Donations and gifts – non-monetary	–	–
Bequests and legacies	–	–
Grants:		
• DFAT	9,792	7,927
• Other Australian	2,486	815
• Other Overseas	10,161	7,202
Investment income	–	–
Commercial activities income	–	–
Other income	2,010	1,486
Revenue for international political or religious proselytisation programs	–	–
Total revenue	24,900	17,624
Expenditure		
International aid and development programs expenditure		
International programs:		
• Funds to international programs	24,183	17,396
• Program support costs	1,105	1,108
Community education	–	–
Fundraising costs:		
• Public	68	27
• Government, multilaterals and private	–	–
Accountability and administration	554	198
Non-monetary expenditure	–	–
Total international aid and development programs expenditure	25,910	18,729
Expenditure for international political or religious proselytisation programs	–	–
Domestic programs expenditure	276	–
Commercial activities expenditure	–	–
Other expenditure	–	–
Total expenditure	26,186	18,729
(Shortfall)/Excess of revenue over expenditure	(1,286)	(1,105)
Other Comprehensive Income	–	–
Total Comprehensive Income	(1,286)	(1,105)

Notes: This operating statement represents IFRS financial information and is extracted specifically for the operations of the International Health Programs as required by the ACFID Code of Conduct. The deficit represents the Institute's additional financial contribution to the programs.



ACFID
MEMBER

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The Macfarlane Burnet Institute for Medical Research and Public Health Limited is a signatory to the Australian Council for International Development Code of Conduct. The Code requires members to meet high standards of corporate governance, public accountability and financial management. These financial statements have been prepared in accordance with the requirements set out in the ACFID Code of Conduct. More information about the ACFID Code of Conduct can be obtained from ACFID.



Independent Auditor's Report

To the members of Macfarlane Burnet Institute for Medical Research and Public Health Ltd

Opinion

We report on the **Summary Financial Statements** of Macfarlane Burnet Institute for Medical Research and Public Health Ltd (the Group) as at and for the year ended 31 December 2022. The Summary Financial Statements are derived from the audited financial report of the **Group** (the Audited Financial Report).

In our opinion, the accompanying Summary Financial Statements of the Group are consistent, in all material respects, with the Audited Financial Report, in accordance with the basis of preparation described in Note to the Summary Financial Statements.

The **Summary Financial Statements** comprises:

- i. Summary consolidated statement of financial position as at 31 December 2022;
- ii. Summary consolidated statement of profit or loss and other comprehensive income for the year ended 31 December 2022;
- iii. Burnet Institute International Development Activities Operating Statement for the year ended 31 December 2022; and
- iv. Basis of preparation note.

The Summary Financial Statements are contained in the Audited Financial Report on pages 38 to 41. The Group consists of Macfarlane Burnet Institute for Medical Research and Public Health Ltd (the Company) and the entities it controlled at the year end or from time to time during the financial year.

Scope of the Summary Financial Statements

The Summary Financial Statements do not contain all the disclosures required by *Australian Auditing Standards* applied in preparation of the Audited Financial Report. Reading the Summary Financial Statements and this Auditor's Report thereon, therefore, is not a substitute for reading the Audited Financial Report and our auditor's report thereon.

The Audited Financial Report and our auditor's report thereon

We expressed an unmodified audit opinion on the Audited Financial Report in our auditor's report dated 26 April 2023.

Emphasis of matter – basis of preparation and restriction on use and distribution

We draw attention to the note to the Summary Financial Statements, which describes the basis of preparation.

The Summary Financial Statements have been prepared to assist the Directors of Macfarlane Burnet Institute for Medical Research and Public Health Ltd for the purpose of complying with the presentation and disclosure requirements set out in the Australian Council for International Development (ACFID) Code of Conduct. As a result, the Summary Financial Statements and this Auditor's Report may not be suitable for another purpose. Our opinion is not modified in respect of this matter.



The Auditor's Report is intended solely for the Directors of Macfarlane Burnet Institute for Medical Research and Public Health Ltd for the purpose of complying with the presentation and disclosure requirements set out in the Australian Council for International Development (ACFID) Code of Conduct and should not be used by or distributed to parties other than the Directors of Macfarlane Burnet Institute for Medical Research and Public Health Ltd. We disclaim any assumption of responsibility for any reliance on this Auditor's Report, or on the Summary Financial Statements to which it relates, to any person other than the Directors of Macfarlane Burnet Institute for Medical Research and Public Health Ltd or for any other purpose than that for which it was prepared.

Other Information

Other Information is financial and non-financial information in Macfarlane Burnet Institute for Medical Research and Public Health Ltd's annual reporting which is provided in addition to the Financial Report and the Auditor's Report. The Directors are responsible for the Other Information. Our opinion on the Financial Report does not cover the Other Information and, accordingly, we do not express any form of assurance conclusion thereon, with the exception of the ACFID Financial Statements and our related assurance opinions. In connection with our audit of the Financial Report, our responsibility is to read the Other Information. In doing so, we consider whether the Other Information is materially inconsistent with the Financial Report or our knowledge obtained in the audit, or otherwise appears to be materially misstated. We are required to report if we conclude that there is a material misstatement of this Other Information, and based on the work we have performed on the Other Information that we obtained prior to the date of this Auditor's Report we have nothing to report.

Responsibility of the Directors for the Summary Financial Statements

The Directors are responsible for the preparation of the Summary Financial Statements in accordance with the basis of preparation described in Note to the Summary Financial Statements, including their derivation from the Audited Financial Report of the Group as at and for the year ended 31 December 2022.

Auditor's responsibility for the Summary Financial Statements

Our responsibility is to express an opinion on whether the Summary Financial Statements are consistent, in all material respects, with the Audited Financial Report based on our procedures, which were conducted in accordance with Australian Auditing Standard ASA 810 Engagements to Report on Summary Financial Statements.

KPMG

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Partner

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26 April 2023

Excellence. Innovation. Impact.

Patron-in-Chief:

Victorian Governor, the Honourable
Linda Dessau AC CVO

Director and CEO:

Professor Brendan Crabb AC,
PhD, FAA, FAHMS, FASM

Deputy Directors:

Professor Margaret Hellard AM,
MBBS, PhD

Professor James Beeson,
MBBS, PhD

Associate Professor David Anderson,
BSc(Hons), PhD

Company Secretary:

Peter Spiller, BBus, CPA
ABN 49 007 349 984

Editorial Manager:

Christine Elmer

Design:

Made Visual

Photographers:

Tim Kindler, Australia

Simon Harsent, Papua New Guinea

Maung Aye Chan, Myanmar

Subjects featured in photographs throughout this annual report provided their express written or verbal consent for their image to be captured and used by Burnet Institute. In the case of children and adolescents who are featured, consent was provided by the parent and/or guardian.

The Macfarlane Burnet Institute for Medical Research and Public Health Ltd (Burnet Institute) gratefully acknowledges funds received from the Victorian Government principally under its Operational Infrastructure Support Program, and from the Australian Government principally through the Department of Foreign Affairs and Trade, and the National Health and Medical Research Council.

Burnet places accountability at the forefront of our work and upholds the highest standards of practice. We are an active member of the Australian Council for International Development (ACFID) and are committed to full adherence to the ACFID Code of Conduct. Information about how to make a complaint on any breach of conduct can be found at www.acfid.asn.au.

We take all complaints seriously and will handle them in a timely and sensitive manner, protecting the privacy of stakeholders. Complaints should be made by calling +61 3 9282 2111, emailing feedback@burnet.edu.au or in writing to Chief of Staff, Burnet Institute, GPO Box 2284, Melbourne 3001.

People in local communities are at the centre of our work. Burnet has an organisational Safeguarding Code of Conduct with a strong commitment to child safeguarding and the prevention of sexual exploitation, harassment and abuse, to ensure the wellbeing of our local partners and community members are always our priority.

Burnet Institute is a member of the Association of Australian Medical Research Institutes (AAMRI), the peak body representing Australia's pre-eminent independent medical research institutes. All members of AAMRI are internationally recognised as leaders in health and medical research. Burnet is fully accredited by the Australian Government's Department of Foreign Affairs and Trade. This status represents the Australian Government's confidence in our organisational effectiveness, governance and development programs.

A full copy of the Financial Report is available on our website. Alternatively, for a printed copy, please call +61 3 9282 2111. The Financial Report has been prepared in accordance with the requirements set out in the *Corporations Act, 2001* and the ACFID Code of Conduct.

Auditors: KPMG.

Partner: Simon Dubois. Registered Company Auditor,
727 Collins Street, Melbourne VIC 3008.

Front cover image: Claudia Barnes conducting research in Burnet's laboratory, image credit: Tim Kindler.

For more information about our work, visit burnet.edu.au or call +61 3 9282 2111





Family at a mobile health clinic in Delroy, Dadul ward, East New Britain, PNG. Photo taken by Simon Harsent and used with permission.

A more equitable world through better health.

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OVERSEAS

We have offices or representatives in Australia, Papua New Guinea and Myanmar, and also contribute to activities in other Asian, Pacific and African countries.

For more information, contact us at info@burnet.edu.au or call + 61 3 9282 2111.

ABN 49 007 349 984



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