



Burnet
reach for the many

Thanks to you...

Spring 2024



Project milestones, breakthrough research and career-building support – made possible thanks to you!

Message from the CEO:

This year's big breakthroughs – made possible by you!



I'd like to begin with a big thank you to you and all our supporters – what an amazing impact you have had since our last Thanks to You newsletter in April.

The universal COVID-19 vaccine, developed in Burnet labs, is now on the brink of success. The backing you provided over many years, including a big fundraising push in 2023, enabled the team to spend the first half of this year completing essential validation experiments. Soon we'll submit a patent application and from there we will begin making approaches to industry partners to assist us in progressing through the next phase of development towards clinical trials.

Earlier this year, Professor Gilda Tachedjian and Dr Joshua Hayward asked for funds to support their ground-breaking work on bat virology and immunology – and you responded with a surge of donations tallying more than half a million dollars. This has made it possible for Gilda and Josh to continue their investigation into bat immune systems, changing how we think about keeping communities safe from infectious diseases in the future. What an incredible effort, thank you!

And you've powered our work in other ways, too. Thanks to you, 22 staff members have been announced as beneficiaries of the 2024 Burnet Travel Awards. These awards, fully funded by supporters, give researchers and professional staff the opportunity to travel to conferences, gaining experiences that will advance their careers, and help build the future of Burnet.

We're also very fortunate in this newsletter to share stories from two donors. I am sure you will be captivated by Gabrielle Lee's recollections of a childhood spent in Papua New Guinea, and how she picked up the phone to Burnet the moment she learned about the Healthy Mothers Healthy Babies program, as well as the efforts of schoolgirl Jojo, who saved her pocket money for more than three years to make a donation to malaria research.

I am always deeply moved by the personal stories of our donors and how they came to be supporters of our work. If you have a story about what first motivated you to become a Burnet supporter, or what it means to you now, please get in touch with us!

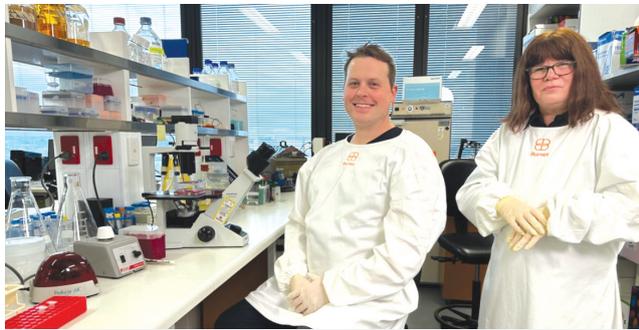
Finally, I'd like to take this opportunity to thank everyone who completed the survey in our last newsletter. Your input is so important to us and we really appreciate you taking the time to support us in this way.

Professor Brendan Crabb AC
Director and CEO

Supporters rally:

Helping Burnet unlock the mysteries of bat immunity

The work of Professor Gilda Tachedjian and Dr Joshua Hayward is driven by the cryptic and compelling insight that the world's bats carry many lethal viruses – yet bats themselves very rarely get sick.



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Bats are exceptional animals and one of their most infamous traits is their role as the hosts of numerous new and emerging viruses that are deadly when transmitted to humans, such as the Ebola virus and the SARS-coronaviruses.

Josh

Gilda, Josh and their research colleagues are on a mission to unlock the secrets of the complex immune systems that keep bats healthy – in the belief it may lead to breakthroughs in efforts to keep the public safe from infectious diseases.

The researchers knew they needed the support of donors to fund this ground-breaking work on bat virology and immunology – so earlier this year, they put out a call for help. Supporters immediately rallied around the project, quickly reaching the funding target, and contributing over \$500,000 in donations large and small, to the immense gratitude of Gilda and Josh.

“Thanks to you, we will be able to advance our research on bat immune systems, working to better understand if bats hold the key to viral immunity,” says Josh.

Already, the team has detected and explained some unique changes in the natural immune defences of bats, and discovered that their DNA carries the traces of viral infections experienced by ancestral populations, possibly millions of years ago. In partnership with colleagues from the CSIRO, they have also discovered a new bat retrovirus that may pose a significant risk to humans.

Thankfully, we have a community of supporters ready to back Gilda and Josh as they continue to search for ways to boost human immune responses, while keeping us safe from new threats.

“Thank you as always for your support,” says Gilda. “This groundbreaking research is only possible through the support of donors like you.”

The reward is a body of work that has not only informed the development of a powerful, vaccine platform for COVID-19 and other coronaviruses with pandemic potential, but which also promises to deliver much-needed breakthroughs in the ongoing quest for highly effective malaria and hepatitis C vaccines.

It is an example of how our donors continue to come together with our outstanding researchers in a collective effort to make the world a safer, fairer place for all. Together, we are securing the future health of families and communities, here at home and across the globe. **Thank you!**

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We did this together:

A vaccine platform on the brink of success

Built to address unknown future variants and capable of being rolled out in countries with low vaccine take-up, the Burnet vaccine platform is a success story of long-term research – made possible by generous donors.

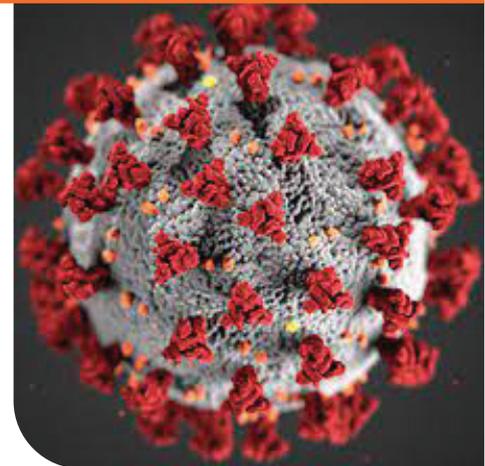
We did it. Together.

What began as fundamental discovery research in the Burnet laboratories at the height of the COVID-19 crisis has now passed preclinical validation, a critical step on the way towards clinical trials with an industry partner that can help us deliver a universal vaccine for protection against the COVID-19 virus and its variants.

Never has it been more accurate to say that the research behind this cutting-edge innovation would simply not have been possible without support.

Back in 2021, a team led by Dr Andy Pombourios and Professor Heidi Drummer engineered a spike protein they believed could be used to make stronger and longer-lasting COVID-19 vaccines, capable of beating back the surges of COVID-19 variants. The only reason they were able to pursue their discovery was because our dedicated donors stepped up to fund the 'proof-of-concept' work, generating the data that showed the engineered spike protein was capable of producing a superior antibody response.

That milestone led to a rapid expansion of the team's work and the award of an mRNA Acceleration Program (mAP) Grant from the Government of Victoria to adapt our innovation to the mRNA vaccine platform, which has been achieved.



Across 2022 and 2023, the team refined and strengthened the engineered spike protein, paving the way for future vaccines to be even more effective against current and future strains of COVID-19. They also proved the spike protein could be produced with a relatively simple two-step process, and stored at higher temperatures than existing vaccines. In short, it was more effective and more stable – a game-changer for low- and middle-income countries where vaccination numbers are comparatively small and health budgets limited.

The team has also shown that the technology developed at Burnet can be applied to other coronaviruses with the potential to spill over from their animal reservoirs into humans thus preparing us for the next pandemic.

The next crucial step was to produce the data package required by potential industry partners ahead of clinical trials, regulatory approval and ultimately, production of the new vaccine. This 'preclinical validation' came with a hefty price tag, but our donors, many of whom had been part of this project almost from its inception, moved quickly to raise the necessary funds.

Throughout the early part of 2024, Andy, Heidi and the team were immersed in validation experiments, undertaken in collaboration with the Doherty Institute. Their findings were decisive, and a full patent application will be submitted in advance of approaches to commercial partners.

Burnet's vaccine platform, built to address unknown future variants and capable of being rolled out in countries where logistics have so far hampered vaccine take-up, is a success story of long-term research.

The commitment of our researchers was matched by the conviction of our donors who helped push the project through at critical points when lack of funding threatened to bring progress to a halt.

The reward is a body of work that has not only informed the development of a powerful vaccine platform for COVID-19 and other coronaviruses with pandemic potential, but which also promises to deliver much-needed breakthroughs in the ongoing quest for highly effective malaria and hepatitis C vaccines.

It is an example of how our donors continue to come together with our outstanding researchers in a collective effort to make the world a safer, fairer place for all. Together, we are securing the future health of families and communities, here at home and across the globe.

Thank you so much for the role you played in making this possible, we simply couldn't do it without you.



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From initial donor backing in 2021, the ongoing monthly donations of our Research Action Partners, and the 2023 fundraising drive, your donations enabled us to take our initial discovery research through critical research stages, and we are one step closer to creating a universal COVID vaccine. I cannot thank you enough for your faith in the team and our research.

Dr Andy Poubourios

Gabrielle's journey: From childhood memories to life-saving care

Gabrielle Lee is a new donor who received a request for support from Burnet in April 2024, asking her to donate to help mothers and newborn babies in Papua New Guinea.

At the age of 11, Australian-born Gabrielle Lee was living in Papua New Guinea with her family, attending school in Port Moresby and venturing up into the Highlands for holidays.

She loved the sights and sounds of the country: the vibrant clothes, the ladies selling sapota juice door-to-door, the sounds of the kerosene drums. But she also remembers the backdrop of colonialism, the segregation of the schools, and the disapproval her mother faced whenever she stepped in to support local people.

Once, on a lunchtime walk with school friends, Gabrielle noticed a woman wearing a dress that looked like one of her own. Later, her mother confirmed she'd given the dress away, adding "Her need is much greater than yours". It was a turning point for the young Gabrielle.

"I could see my Mum's attitude was right, and that she was doing the right thing," says Gabrielle, now in her 80s. "It was a moment that stayed with me my whole life."

Gabrielle returned from Papua New Guinea four years later, finishing off her education at a boarding school in Queensland, and setting up a good life for herself at home in Australia. But she never forgot how much she loved everything that was "exciting and different" about Port Moresby, or the importance of helping people in need.

In April this year, when she first learned about Burnet's work, her very first instinct was to pick up the phone.

"I called in to ask how I could best help the people of Papua New Guinea," she says.

Now, Gabrielle is a passionate supporter of the Healthy Mothers Healthy Babies program, and we're so thrilled to have her on board. **Thanks Gabrielle!**

Tell us your story!

We really enjoy hearing from our supporters – the stories of how you first came to support us and why are so varied and so interesting.

If you'd like to be featured in an upcoming edition of *Thanks to You*, we'd love to hear from you.

Please get in touch via giving@burnet.edu.au



Image above: Several recipients of the 2024 Burnet Travel Awards.

Burnet's best and brightest meet their global peers – thanks to you!

Nothing drives discovery and innovation like collaboration. And one of the best ways for young researchers to develop their cooperative skills and make valuable industry connections is to travel, meeting and forming partnerships with peers from around the world.

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Science is a global business. We can't let Australia's geographical distance get in the way," says Burnet Director and CEO Professor Brendan Crabb AC. "Our young researchers need to mix with their peers around the world, a proven model that is essential to advancing our work.

Fully funded by our supporters to a total of more than \$230,000, the 2024 Burnet Travel Awards are giving 22 young leaders the opportunity to pursue career-building adventures in locations across Australia, as well as Germany, Peru, Portugal and the USA.

Stephanie Routley from the Vector-Borne Diseases and Tropical Public Health Group is one of the excited recipients, having been awarded the Margaret and John Crutch Scholarship, worth \$50,000 per annum for three years.

"I'm thrilled and incredibly grateful to receive this opportunity," she said at the award ceremony, attended in person and online by many of our generous donors, including Margaret and John's daughter, Ruth Crutch.

"I've been in infectious disease research for several years, but I've never been in a position to be able to pursue a PhD, until now. "

This year, the awards were extended to include two Professional Services Fellowships, honouring the contribution of non-research team members and providing them with funding to travel for professional development activities in Australia and overseas. The inaugural winners were IT Support Officer, Billy Inkharm, from the Daru office in Papua New Guinea, and long-standing Program Engagement Manager, Naanki Pasricha.

"I'm so proud to work with you [and] for you, and to continue supporting you every day," said Naanki of her colleagues. She will use the funds to complete specialist courses at the National Institute of Organisation Dynamics and Swinburne University.

By making it possible for our talented young leaders to travel, supporters like you are not just building careers, but building the future of Burnet – and making a long-term investment in global public health.

You can see the full list of 2024 Travel Award winners at go.bur.net.au/travelawards

The challenges and strengths that define Burnet, at the 2023 AGM

One thing characterises the Burnet community above all others: a steadfast commitment to fighting the good fight.

That defining sense of resolve, shared by both staff and supporters, was apparent across all the news and breakthroughs featured in the recently released 2023 Annual Report.

In her introductory message, Burnet Chair Mary Padbury paid tribute to the hard work being done by the Burnet team against a backdrop of relentless conflicts and compounding natural disasters.

"We have a crucial role to play in supporting the fundamental human right to good health," she reminded us, "especially in times of crisis and trauma, and especially among the vulnerable and hard to reach."

The Annual Report was officially launched at the Annual General Meeting on 23 May, with addresses from both the Chair and Burnet Director and CEO Professor Brendan Crabb AC.

In his presentation, Brendan raised concerns about impending global crises and the very real risk they would widen the gap between the secure and affluent and "those with the least" – but he was confident Burnet was equipped for the challenge, thanks in no small part to the loyalty and generosity of supporters.

"Our constituents have really difficult days ahead and our only way out of that is to innovate like crazy, in that way that Burnet does," he said. "We have to work hard together, for people who are going to be really under the pump in the next decade. And that's what we're going to use our amazingly strong position to do – so, thank you to all of our staff and students and supporters."

The event closed with the announcement of the Gust-McKenzie Medal, awarded to Dr Julie Hennegan, Co-Head of the Working Group on Global Adolescent Health, for her research into the social and environmental determinants of young people's health. Announcing the prize, Brendan described Julie's work on menstrual health – long regarded as a taboo subject – as something quintessentially Burnet.

"At Burnet, we run towards taboo issues, whatever they might be, so there is a dual pride in having Julie win this award: an outstanding researcher working in a space that I think defines us."

You can read the annual report by visiting go.bur.net.au/2024annualreport. To request a copy, please contact us at giving@burnet.edu.au or call 03 9282 2221.



2023
Annual
Report

A more equitable world
through better health



Community champions:

Mentor Mothers lead change in PNG

Burnet Institute's Mentor Mothers program empowers local volunteers to advocate for essential HIV, Syphilis and Hep B screenings and treatment for pregnant women in Papua New Guinea.

For over a decade, your support has made it possible for Burnet Institute teams in Papua New Guinea to collaborate with local agencies on keeping communities safe from infectious diseases, and supporting the health of mothers and their babies.

One of the centrepieces of this work is Mentor Mothers: a volunteer peer-support program that raises awareness about preventative healthcare for mothers at risk of passing on HIV and other sexually transmitted diseases to their children during pregnancy, delivery, labour, or breastfeeding.

The Mentor Mothers are women living with HIV who have been trained as advocates, speaking with men and women in their own communities about the importance of getting screened, tested and treated for sexually transmitted diseases before pregnancy and during the first trimester. Mentors also encourage pregnant women to use antenatal care and deliver their babies at a health facility with trained medical staff.

This initiative is made possible by the support of partner organisations including PNG's National Department of Health, the Australasian Society of HIV, Viral Hepatitis and Sexual Health Medicine. Your contributions help us deliver grassroots programs such as these, with the power to quickly and meaningfully transform health outcomes for families and communities.

Did you know gifts in Wills are critical to powering research at Burnet?



If you would like to know more about leaving a gift in your Will to Burnet Institute, a great first step is to have a chat with Penny Burke, our gifts in Wills Manager.

Get in touch for a friendly chat today by contacting **Penny** on **0429 461 661** or via email at penny.burke@burnet.edu.au

Thanks to you | 9

Jojo (below) loved visiting the Burnet labs in April.



How a science-loving schoolgirl became Burnet's youngest donor

Jojo is a schoolgirl who plays basketball, loves her dogs, and reads about four books a week.

She was just eight years old when one of Burnet's senior researchers, Dr Linda Reiling, paid a visit to her school. Linda was there to talk about malaria, and her team's efforts to help eliminate the disease by 2030. As a budding scientist, young Jojo was fascinated.

With the help of her mum Sam she enrolled in an extra-curricular workshop to learn more about blood science. She also started saving her pocket money so she could make a donation to the work being done by Burnet researchers.

Now 12 years old, Jojo visited Burnet in April to make her donation – the product of three solid years of saving – in person and meet some of the team and was treated to a tour of the labs with Linda. "It made me excited, curious and very happy," Jojo says, adding that she's now definitely thinking about becoming a medical researcher. Or a surgeon. Or a librarian. Or a dog walker.

Thanks so much for supporting our work, Jojo.

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I wanted to help people: I don't think people really understand how much malaria affects people, particularly in poorer countries. I think it's something that should be solved, and I would like to help the children so they can have a good life, like me.

Jojo

Grow Strong, Grow Healthy: A lifeline for children's health in East New Britain

Building on the foundation of Burnet's Healthy Mothers, Healthy Babies (HMHB) program, the Grow Strong, Grow Healthy (GROW) initiative is tackling the crisis of child stunting in Papua New Guinea.

Since 2014, Burnet's Healthy Mothers, Healthy Babies (HMHB) research program has been providing valuable insights into the conditions that contribute to Papua New Guinea's high rates of maternal and infant mortality, and the barriers that prevent local people from accessing the health care they need.

It has also provided the evidence base for a range of new initiatives – including Grow Strong, Grow Healthy, a project that focusses on reducing rates of 'child growth failure', or 'stunting'.

Childhood stunting affects the physical and cognitive development of children, causing long-term impacts on their health, and on their ability to learn and thrive. It is also a major risk factor for child mortality. The project, known locally as GROW, is run by Burnet's Kokopo office in the East New Britain province where stunting affects almost half of all children under five.

Since GROW was launched in 2022, the project team has established a Nutrition Advisory Committee, delivered workshops for health workers, and held highly engaging and interactive discussion groups for parents and carers.

Discussion groups typically attract around 20 parents, including a handful of fathers, but the team had a breakthrough in May with a session that attracted no less than ten local dads, there to learn more about how to support their pregnant partners and foster the healthy development of their babies.

"Some of the feedback from fathers mentioned supporting the mothers with cooking preparation such as fetching water and chopping firewood. We are so excited to see dads actively thinking of ways to be engaged in what is traditionally seen as 'women's work", reported the team.

Thanks to the ongoing commitment of many valued philanthropic donors and our Research Action Partners, GROW will continue to expand its activities in the months ahead. Thank you!



Image caption: Local fathers attend a discussion group to learn more about how to support their pregnant partners.



We'd love to hear from you: Supporter Connection Survey 2024

The role our supporters play is absolutely crucial to our mission - that's why we want to hear directly from you in our new Supporter Survey. The insights you share about what Burnet means to you and what motivates you to support us will help us tell our story in the months ahead, reaching more people and making our community even stronger.

Have you considered becoming a Research Action Partner?

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Every month when I make my contribution, it reminds me of how grateful I am to be in a position where I can help improve life for others who are living in far less privileged circumstances.

Fiona Athersmith, long-term Research Action Partner

To learn more about becoming a Research Action Partner and how your ongoing monthly support can change lives, contact **Emma Colindres-Lira** at giving@burnet.edu.au or via mobile on **0407 007 727**.



Your opinion matters. Thank you so much for sharing your thoughts with us. We look forward to hearing from you. Thank you!

Q1.

Thank you so much for your compassion towards the communities that Burnet Institute seeks to serve. Do you mind sharing what sparked your generosity to Burnet?

- I first heard of Burnet Institute during COVID
- I've been personally impacted by infectious diseases
- I have a science/medical background and admire your work
- I believe medical research is vitally important to contributing to people's health
- I've seen the impact of inequity in communities at home and overseas
- I've supported the work since the days of Fairfield Hospital
- I had a connection with Mac Burnet himself
- In my own words:

Q2.

At Burnet, we are actively working towards a healthier world. A world where all people, no matter their status, location or background, have access to life-changing research and health programs. We call this global health equity. Our teams drive progress in the most unlikely of places and under the most unfavorable of conditions. We're also paying close attention to the impacts of a rapidly changing environment. Everything we do is about one fundamental goal: a better, fairer, healthier world, with no-one left behind.

Why is global health equity important to you?

- I believe everyone should have access to appropriate health care no matter where they live or what they believe



Please scan this QR code to access the Supporter Survey. Thank you!

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Overseas

Burnet has offices in Papua New Guinea and Myanmar, and also contributes to research and public health programs in many other countries across Asia, the Pacific, Africa, Europe, and North America.

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