2025 Biosciences Fund + RNA Pipeline Grants Announcement Event

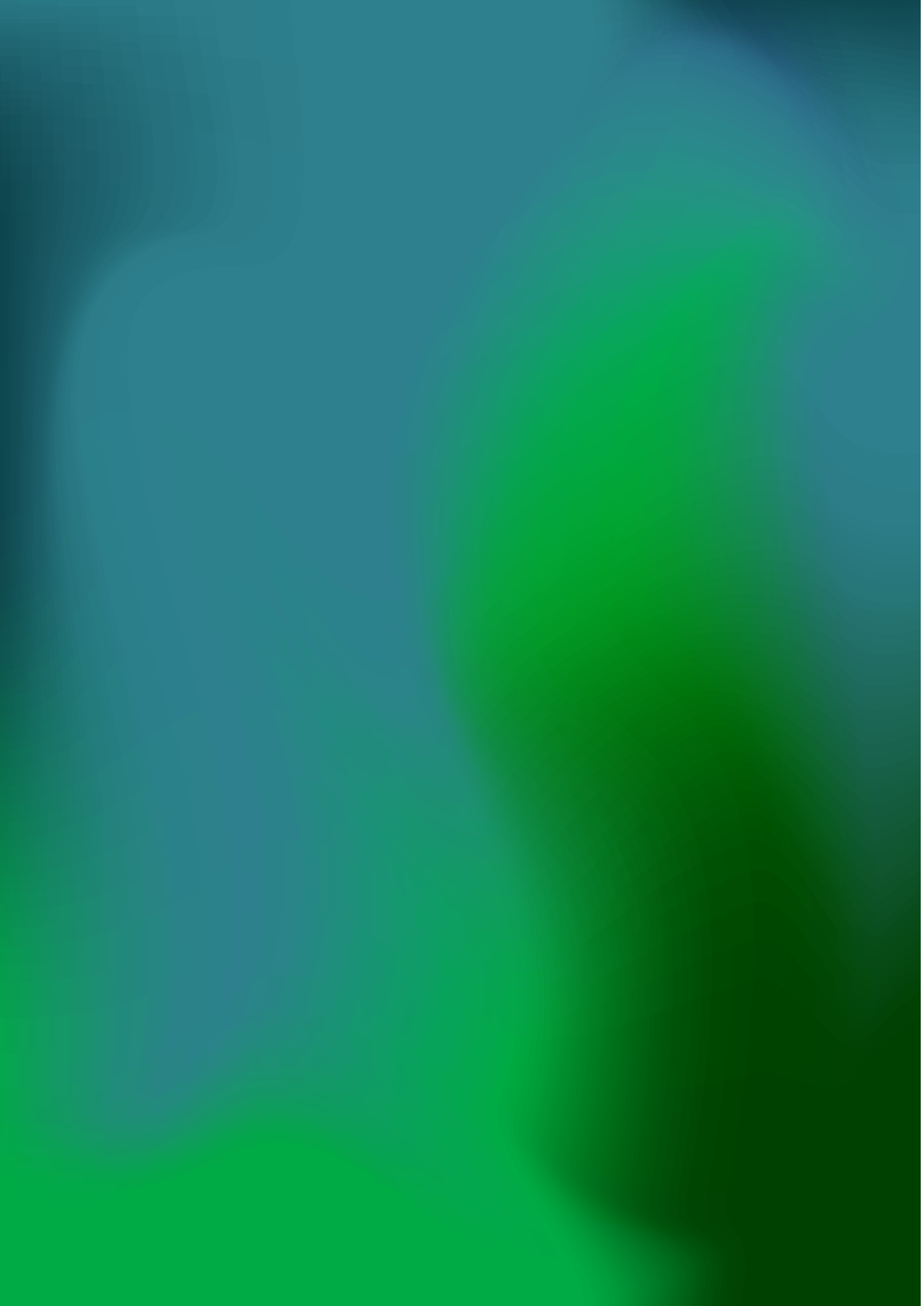
Greenhouse, Salesforce Tower

180 George St, Sydney 2000

Thursday 5 March 2026

NSW GOVERNMENT

2025 Biosciences Fund
+
RNA Pipeline Grants Announcement Event



NSW GOVERNMENT

Order of Proceedings

Introduction and Acknowledgement of County
Master of Ceremonies
Dr Darren Saunders
Deputy Chief Scientist & Engineer

Address from the Chief Scientist & Engineer
Professor Hugh Durrant-Whyte

Address from the Minister for Innovation, Science and Technology
The Hon Anoulack Chanthivong MP

2025 Biosciences Fund Video

Announcement of the 2025 Biosciences Fund Recipients

RNA Pipeline Grants Video

Announcement of the RNA Pipeline Grants Recipients

Discussion with Biosciences Fund and RNA Pipeline Grants Recipients
Dr Darren Saunders

Networking

Table of Contents

Message from the NSW Chief Scientist & Engineer

Welcome to this combined celebration of successful recipients of the 2025 Biosciences Fund (BioSF) and RNA Pipeline Grants (RPG).

The BioSF was inspired by the successful Physical Sciences Fund (PSF) – my office's first research commercialisation program that was in turn inspired by the success of the Medical Devices Fund (MDF). Since 2018, the PSF has supported 22 companies, which have attracted $340 million in external funding and a further $69 million in additional grant funding.

In 2024, the inaugural round of the BioSF awarded $4.5 million to three companies, developing a revolutionary therapy to treat Alzheimer's disease, a first-in-class antiplatelet drug treatment for stroke, and new therapeutics targeting previously 'undruggable' disorders using AI-devised RNA structures.

Tonight's successful recipients in the second BioSF round are working on equally exciting and impactful innovations – biomanufacture of human milk proteins for infant formula, production of green hydrogen for chemical manufacture, emissions reduction in grazing animals, and low-cost DNA sequencing.

We also celebrate the successful recipients in the RPG. The RPG supports the development of innovative RNA-based therapies, vaccines and technologies. It is one of a suite of initiatives driving the establishment of an RNA ecosystem in NSW, and the manufacture of RNA therapeutics at the new RNA Research and Manufacturing Facility, opening shortly at Macquarie University. The two funded projects are a next-generation RNA therapeutic that precision-targets cancer cells including acute myeloid leukaemia, and a new mRNA tuberculosis vaccine that aims to deliver improved protection over current treatments.

Please join me in congratulating the successful recipients in both the BioSF and RPG for their exciting, innovative and highly impactful projects.

2025 Biosciences Fund

The BioSF is a $4.75 million, competitive biological sciences (biotechnology and life sciences) commercialisation program funded by the NSW Government. It is administered by the Office of the Chief Scientist & Engineer within the Premier's Department.

The objectives of the BioSF are to:

- improve commercialisation opportunities for NSW-based start-ups and businesses
- provide financial support to progress the development of new and innovative devices and systems across the branches of the biological sciences (biotechnology and life sciences), including biomanufacturing, genetic engineering, synthetic biology and agrifood
- realise benefits from innovation in NSW.

The BioSF targets companies with innovative products or systems within Technology Readiness Levels (TRL) 3 – 7 and aims to help them move along the TRL scale, to commercialise their idea and attract large-scale private investment.

The NSW Government recognises the importance of realising the commercial applications of NSW research. By addressing gaps in the product life cycle between early-stage research and mature investment opportunities, the BioSF delivers grants to drive the commercialisation of highly innovative ideas into new devices, systems, processes or services.

Precision Fermented Human Beta-Casein Development and Commercialisation

“This is the closest infant formula has ever come to the real thing.”

Jan Pacas, CEO

All G Co Holdings Pty Ltd

www.allg.com

Stage/Category:
R&D

Contact:
Jan Pacas
CEO

Email: rob@allg.com
Phone: 0428 229 651

Globally, the majority of infants rely on formula for essential nutrition, with the World Health Organization estimating 60 per cent of infants under six months are not exclusively breastfed. In Australia, 36 per cent of infants are not exclusively breastfed at four months, rising to 62 per cent by six months.

Current formulas are predominantly derived from cow's milk and differ from human milk in protein composition and structure. While formula provides essential nutrition to support growth and development, it cannot fully replicate the complexity of human milk. As a result, formula-fed infants are associated with higher rates of gastrointestinal infections in early life, childhood obesity, and an increased risk of type 2 diabetes later in life.

All G is an Australian biotechnology company using precision fermentation to create human milk proteins. All G has world-leading capability in the biomanufacture of human casein ‘micelles’: highly complex structures consisting of thousands of interacting milk proteins. These micelles are critical to the nutritional profile of human breast milk, supporting digestion and mineral bioavailability.

Support from the BioSF will allow All G to advance the technical and commercial readiness of their casein research, delivering proof-of-concept scaleup and regulatory approvals. Ultimately, making micellar human caseins available at a commercial scale has the potential to transform the infant formula sector and support improved nutrition for formula-fed infants worldwide. Developing this innovative product in NSW will allow local manufacturing to compete in the global infant formula market valued at $90 billion.

2025 BioSF Grant: $1,109,343

Building Local Biocatalyst Manufacturing Capabilities to Enable Sovereign Green Chemical Production

“With this funding, we can scale production of our biocatalyst, enabling customers to make green hydrogen on-site from waste biomass. This creates a practical, lower-cost pathway to fossil-free essential chemicals, like ammonia for fertilisers that underpin our food system.”

Dr Louise Brown, CEO

The chemical industry underpins thousands of products used in everyday life, yet remains heavily reliant on fossil fuel feedstocks, resulting in significant greenhouse gas emissions. Decarbonising the production of essential chemicals such as ammonia and methanol requires new manufacturing technologies that can be produced reliably, at scale, and at low cost.

HydGene Renewables is a NSW-based biotechnology company developing a biocatalyst platform that converts waste biomass into green hydrogen on-site – an alternative to electrolysis. HydGene’s proprietary biocatalyst is the core enabling technology underpinning its modular hydrogen production systems and is designed to operate on mixed sugar streams derived from waste biomass sources.

This project focuses on scaling in-house fermentation and downstream processing infrastructure to manufacture HydGene’s biocatalyst at scale. The infrastructure will enable controlled, repeatable production of the biocatalyst, supporting improvements in yield, productivity, and consistency required for commercial deployment. This capability enables low-cost, on-site green hydrogen generation for chemical manufacturing and reduces reliance on fossil-derived hydrogen. It also supports the decarbonisation of hard-to-abate industrial chemical sectors while building advanced biomanufacturing capability in NSW.

2025 BioSF Grant: $2,000,000

HydGene Renewables

www.hydgene.com

Stage/Category:

Early-stage/Industrial biotechnology and clean chemical manufacturing

Contact:

Dr Louise Brown
CEO

Email: louise.brown@hydgene.com
Phone: 0412 609 455

number8bio

Development of a Scalable Methane-Reducing Feed Solution for Grazing Sheep and Cattle in NSW

"The biggest emissions problem in livestock comes from grazing animals, and that is why we are tackling it. Our slow-release solution reduces methane emissions and boosts productivity, ensuring better outcomes for farmers and the planet."

Dr Tom Williams, CEO

Number 8 Bio

www.number8.bio

Stage/Category:
Early-stage

Contact:
Dr Tom Williams
CEO

Email: tom@number8.bio
Phone: 0438 924 156

Methane accounts for around 20 per cent of total global greenhouse gas emissions, with animal agriculture being the single largest anthropogenic source. Emissions from cattle and sheep alone are responsible for approximately 6 per cent of total global greenhouse gas emissions.

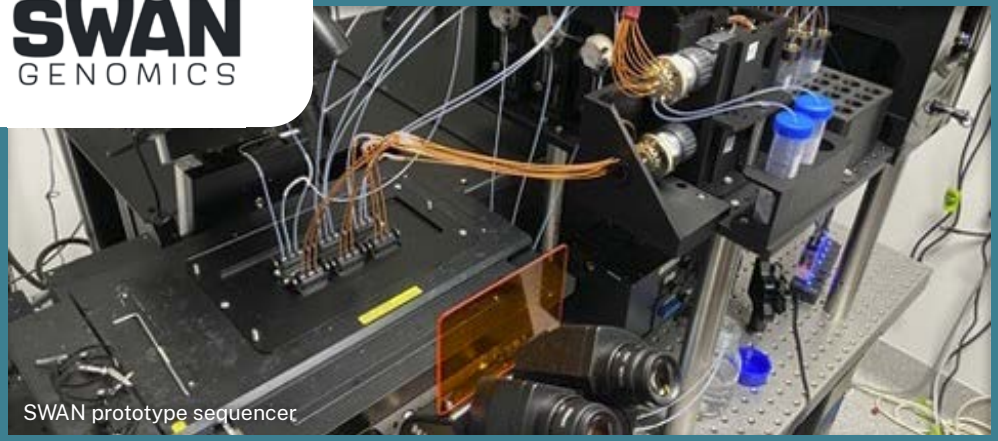
Number 8 Bio is developing a scalable methane-reducing feed solution for grazing sheep and cattle in NSW. This innovative technology converts lost methane energy into improved growth and milk production, delivering benefits for farmers and the climate.

Since the vast majority of cattle and sheep in Australia are farmed in a grazing setting, we have formulated our active ingredient into a slow-release pill, called a bolus, that dissolves in the animal's rumen over several months.

We will use the grant's funds to refine that technology, increase its efficacy and ensure that it will be applicable for the conditions of sheep and cattle farmers in NSW.

There is growing global demand for decarbonised supply chains and sustainable food systems. Addressing methane emissions in grazing livestock is essential to maintain the competitiveness and sustainability of NSW's livestock industries while contributing to national and global climate goals.

2025 BioSF Grant: $1,184,714



SWAN prototype sequencer

Developing the Next Global Standard in DNA Sequencing

“For the first time, we are removing the fundamental trade-offs that have defined DNA sequencing for two decades: cost vs turnaround time vs scalability vs read length. Our goal is to set a new global standard for how genomic information is generated.”

Associate Professor Lawrence Lee, CEO

SWAN Genomics Pty Ltd

www.linkedin.com/company/swan-genomics

Stage/Category:

Early-stage/Device development

Contact:

Associate Professor Lawrence Lee
CEO

Email: lawrence@swangenomics.com
Phone: 0417 445 509

DNA sequencing underpins modern health, agriculture and biosecurity industries, yet access to this critical capability remains constrained by fundamental trade-offs in cost, scalability and turnaround time, and is entirely dependent on overseas supply chains. In regional NSW, diagnostic sequencing results often take weeks to return, compared to same-day turnaround in metropolitan centres, directly contributing to poorer health outcomes.

SWAN Genomics is commercialising an innovative approach to DNA sequencing to deliver more accessible genomics data to existing and new markets. The company's single-molecule sequencing platform represents the next global standard in DNA sequencing.

The technology overcomes the limitations of existing short-and long-read technologies by using proprietary nanoscale optical antennae to amplify fluorescent signals by 1,000-fold, enabling real-time identification of individual nucleotides. This provides an ultra-low-cost, high-accuracy sequencing system that eliminates the trade-offs of existing technologies.

The funding will support the next stage of commercial development, enabling the transition from laboratory proof-of-concept to a prototype platform with defined manufacturing specifications and external user validation.

Major economies have invested heavily in sequencing technologies, and with demand rising rapidly, concentration of supply being offshore puts reliable access to this critical infrastructure at growing risk. SWAN Genomics directly addresses this challenge, providing NSW with sovereign capability and a world-first technology that will democratise access, bridge urban-regional health divides and strengthen food and biosecurity.

2025 BioSF Grant: $450,000

2025 Biosciences Fund Expert Panel

Chair: Professor Tony Weiss AM

Tony is a McCaughey Chair in Biochemistry, and a Professor and NHMRC Leadership Fellow in the School of Environmental Sciences at the University of Sydney. He is an inventor on 169 granted patents in 22 families and is commercialising treatments that decrease scarring and accelerate the repair of wounds. Tony founded Elastagen, one of the first grant recipients through the NSW MDF. Elastagen was acquired for $340 million by Allergan.

Dr Jess Smith

Jess is a Director at Vaxxas and Sicario, and an Investment Manager at Brandon Capital. She was previously a Board Member of the Royal Australian Chemical Institute and Senior Associate Patent Attorney at FB Rice. Jess has been a chair and active committee member in many science and technology initiatives such as the AusBiotech Women in Life Sciences.

Dr Mike Lamprecht

Mike is an Investment Management at Tenmile, specialising in biotechnology, startups and early-stage investments. With over 15 years in the field, he has a background in developing regulatory and clinical strategies for novel cell-based therapies, including at EpiBone, a US biotech firm pioneering adult stem cell-based bone and cartilage grafts.

Dr Phil Wright

Phil was the previous Chief Scientist at the NSW Department of Primary Industries. Prior to that, he was the Principal Director of Science and Research at the NSW Department of Industry and Investment. Phil is a senior public sector leader with over 24 years of experience in science leadership, strategic management, and science and innovation delivery.

Dr Elaine Stead

Elaine is a Principal in Main Sequence's investment team, with a focus on the 'Humanity Scale Healthcare' challenge, and a Director at RNA Australia. She has a background spanning science, entrepreneurship and venture capital, and has an investment track record of over 80 startups across Australia, the United States and Southeast Asia.

2025 BioSF Sub-Committee:

Chair: Anne O'Neill, Director, Enterprise, International Partnerships and Clinical Trials, Office for Health and Medical Research, NSW Health.
Anna Grocholsky, Director, Commercialisation Pathways, Charles Sturt University.
Dr Alisa Selimovic, Senior Investment Manager, IP Group.
Dr Aleta Knowles, Biotech Investment Manager, Uniseed Pty Ltd.
Laureate Prof Brett Neilan, School of Environmental and Life Sciences, The University of Newcastle.
Dr Dharmica Mistry, Director Diagnostics Industry Engagement, MTPConnect.
Geoff Bell, Chief Executive Officer, MicroBioGen.
Mary Frey, Director, Blue Tier Capital.
Harikesh Pushpapathan, Partner, Stoic VC.

RNA Pipeline Grants

The RPG is a $6 million, single-round, competitive technology development and commercialisation program.

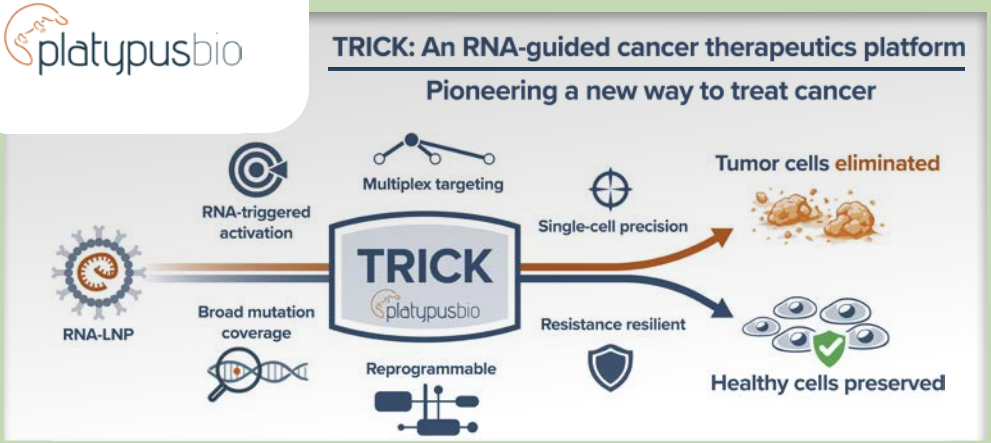
The RPG is part of the NSW Government's RNA R&D Initiatives, administered by OCSE within the Premier's Department.

The objectives of the RPG are to:

- support a pipeline of products that could be manufactured at the NSW RNA Research and Manufacturing Facility
- progress the development and manufacture of innovative RNA therapeutics, vaccines and related technologies – including applications in health, biosecurity and agriculture – towards commercialisation in NSW
- improve commercialisation opportunities for NSW-based startups and businesses through targeted support for translation and scale up
- contribute to a globally competitive RNA ecosystem in NSW that delivers long-term economic, scientific and social benefits, including enhanced workforce capability and sovereign manufacturing capacity.

The RPG supports companies developing innovative RNA therapeutics, vaccines and related technologies within the TRL range of 3-6, helping them to advance along the TRL scale towards commercialisation and manufacturing.

The RPG is part of the broader RNA Program, an initiative of the NSW Government aimed at proactively fostering the growth of a state-based RNA ecosystem. This program reflects the NSW Government's wider commitment to advancing research and development, and manufacturing in the health, medical, agricultural and biosecurity sectors.



TRICK: Trigger RNA-Induced Cell Killing as a New Therapeutic Modality for Cancer

"With our RNA-based technology, we are entering a new sphere of precision medicine. TRICK is an exciting next-generation therapeutic that acts like a smart switch inside cancer cells, killing disease while sparing healthy tissue."

Dr Rob Fagerlund, Co-Founder and CTO

Platypus Bio Holdings Pty Ltd

www.platypusbio.com

Stage/Category:
Early-stage/R&D Therapeutics

Contact:
Chris Alma
CEO

Email: enquiries@platypusbio.com
Phone: 0414 496 099

Acute myeloid leukaemia (AML) is an aggressive blood cancer characterised by poor prognosis, high relapse rates, and limited durable treatment options. Platypus Bio is developing TRICK (Trigger RNA-Induced Cell Killing), a first-in-class RNA therapeutic platform designed to transform how AML and other cancers are treated.

Unlike conventional therapies that damage both healthy and cancerous cells, TRICK functions like an internal 'on switch' that activates only when a cell carries specific harmful RNA mutation signals. Once triggered, TRICK selectively destroys the diseased cell while sparing healthy tissue. This mutation-guided approach offers the potential for safer, more precise treatments and the ability to prevent treatment resistance.

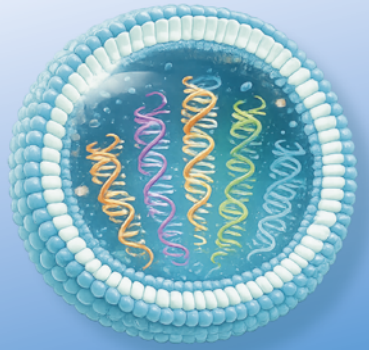
Funding from the RPG will advance TRICK from early proof-of-concept to a manufacturable RNA lipid nanoparticle (LNP) drug candidate. The project will optimise RNA constructs and LNP formulations and validate performance in clinically relevant AML models, including patient-derived systems.

A key technical outcome will be a multiplexed TRICK design capable of targeting several common AML driver mutations within a single therapeutic concept, addressing disease heterogeneity and relapse. Beyond scientific validation, the project will strengthen NSW's sovereign RNA capability by establishing early manufacturing and scale-up knowledge within the State. This will create a clear pathway to future Good Manufacturing Practice (GMP) production at the NSW RNA Research and Manufacturing Facility and position NSW as a global contender in next-generation RNA medicines.

Together, these outcomes will support highly skilled local jobs, attract future investment, and lay the foundation for expanding TRICK into additional cancers and diseases.

RNA Pipeline Grant: $1,811,633

VAXOSOME



Multiplexed mRNA vaccine at molecular scale: lipid nanoparticle delivery of multiple TB antigens

A GMP-ready mRNA Vaccine for Tuberculosis

“Vaxosome is developing a next-generation multiplexed mRNA tuberculosis vaccine designed to deliver broader and more durable protection than current candidates. By targeting both active and latent infection, our approach has the potential to transform TB prevention in high-burden settings.”

Professor Jamie Triccas, CEO

Vaxosome

Stage/Category:
Early-stage

Contact:
Professor Jamie Triccas
Founder and interim CEO

Email: jamie.triccas@sydney.edu.au
Phone: 02 9036 6582

Tuberculosis remains the world’s leading cause of death from an infectious disease, with more than 10 million new cases and over 1.3 million deaths each year. Despite widespread use of the BCG vaccine, protection against pulmonary TB in adolescents and adults remains inadequate, underscoring the urgent need for new vaccine approaches.

Vaxosome is developing a novel multiplexed mRNA tuberculosis vaccine that addresses key limitations of current candidates. The vaccine uses proprietary ionisable lipid nanoparticles to deliver multiple mRNA-encoded antigens spanning both active and latent stages of *Mycobacterium tuberculosis* infection. By targeting a broader antigenic space, this approach aims to generate more comprehensive and durable immune protection than single-or dual-antigen vaccines.

The program is supported by NSW’s rapidly expanding RNA research and manufacturing ecosystem. Process and analytical development are being undertaken in collaboration with the UNSW RNA Institute and Recombinant Products Facility, with pilot-scale manufacture supported by the UTS Biologics Innovation Facility. This pathway is designed to enable efficient technology transfer into the NSW RNA Research and Manufacturing Facility for future GMP clinical-scale production.

Vaxosome’s platform establishes new technical and regulatory frameworks for complex, multiplexed mRNA vaccines. Beyond tuberculosis, this capability provides a foundation for rapid development of next-generation RNA vaccines targeting other globally significant infectious diseases. The project aligns with NSW’s strategic investment in RNA technologies and contributes to long-term pandemic preparedness and global health security.

RNA Pipeline Grant: $2,989,000

RNA Pipeline Grants Expert Panel

Professor Kjesten Wiig, Chair

Kjesten is Director and CEO at the Malaghan Institute of Medical Research and Co-Director of New Zealand's RNA Platform and Professor at the Ferrier Institute. Kjesten has a background in drug discovery in the United States.

Professor Jim Rothwell

Jim is the Director of Biosecurity and Food Safety at the NSW Department of Primary Industries and Regional Development and former Director of the Elizabeth Macarthur Agricultural Institute. He has a background in veterinary pathology and parasiticide development and research.

Associate Professor Jeremy Brownlie

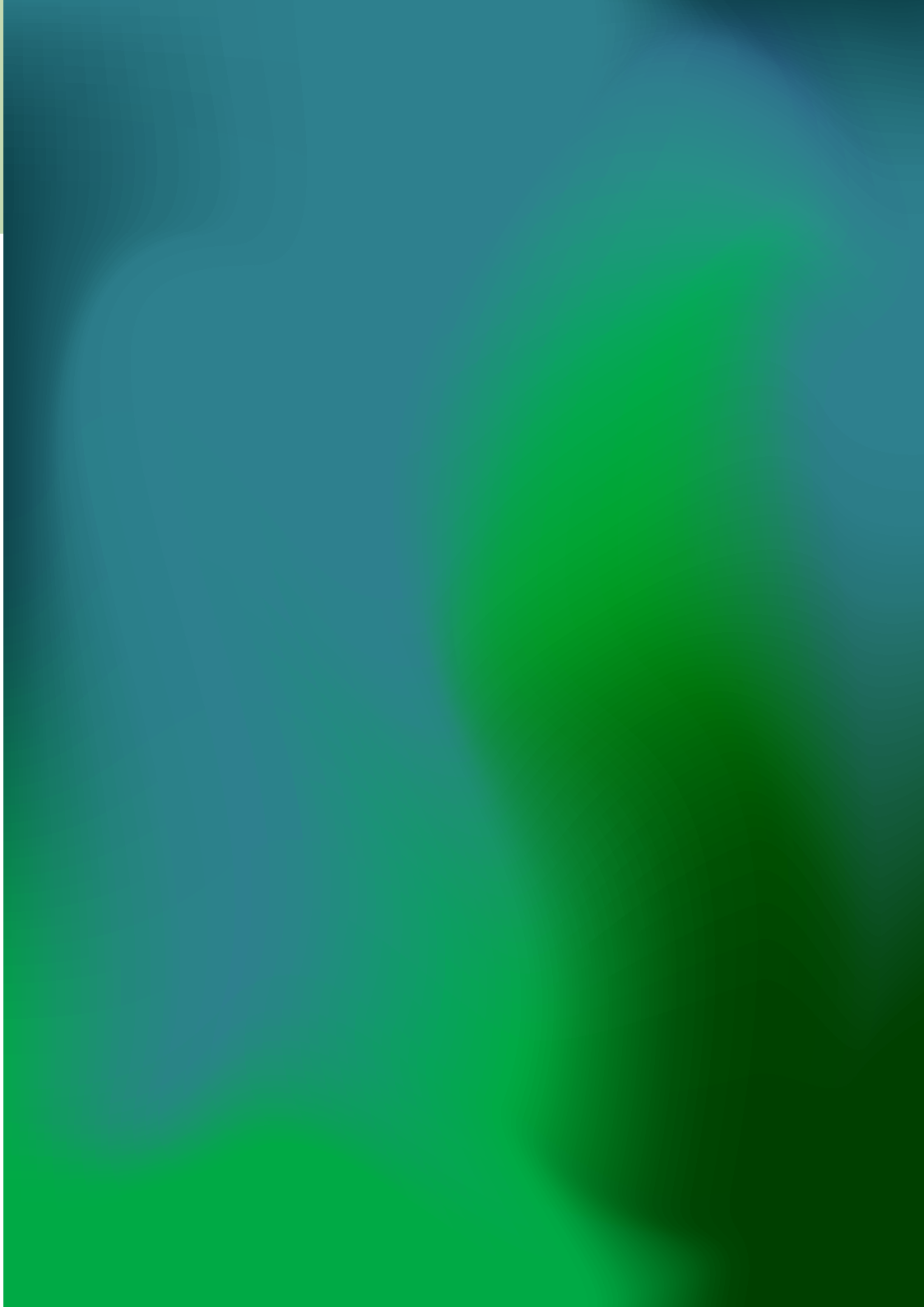
Jeremy is the Director of Engagement and an Associate Professor of Genetics and Evolution at Griffith University. His research investigates how symbiotic bacteria, such as Wolbachia, shape insect biology and influence the spread of insect-borne diseases.

Professor Traude Beilharz

Traude is a Professor of biochemistry and molecular biology at Monash University's Biomedicine Discovery Institute. Her research centres on the 'language' of mRNA – how transcripts are created, processed, stored, translated and ultimately degraded.

Dr Prashanth Rajan

Prashanth is an Associate at Brandon Capital and leads NSW activities for the firm. He was previously Senior Commercialisation Manager at UniSA Ventures. He has a background in bioinformatics, biochemistry and molecular biology with a PhD from the University of Queensland.



NSW
GOVERNMENT