



Centre for Tropical Health
and Emerging Diseases

Annual Report

Sept 2024 - Dec 2025



QIMR
Berghofer

Prepared by
Dr Silvia Luiza Saggiomo

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Message from Founding Director



Professor Darren Gray

Tropical health research is of paramount importance within Australia and our region (Asia-Pacific), and it impacts millions of people across the world. The COVID-19 pandemic served as a critical reminder that infectious diseases remain a significant public health threat, highlighting the importance of research on tropical diseases. Further, as our climate continues to change and temperatures to rise, so will the prevalence and geographical distribution of tropical diseases – posing a significant public health threat.

Together with our founding partners, James Cook University (JCU) and The University of Queensland (UQ), and an extensive network of researchers and stakeholders across Queensland, Australia and the Asia-Pacific, we aim to lead a new era in tropical health research. The Centre for Tropical Health and Emerging Diseases hopes to consolidate and advance tropical health research to mitigate the impacts of climate change, and save lives.

The last year has seen the establishment of the Centre and its launch, the implementation of the governance and operational framework, onboarding of an advisory committee, and the development of key performance indicators. The website is up and running, along with a webinar series and a newsletter. We



Message from Founding Director

had our inaugural annual scientific meeting as part of the 8th Southern Cross Travel and Tropical Medicine Conference in Melbourne.

The Centre has also secured key regional partnerships in Southeast Asia and will welcome a delegation from Malaysia in early 2026. The Centre has provided the platform for grant applications and has had early grant success from major federal funding bodies. In 2026 we will launch the Tropical Accelerator Research Scheme to seed research projects.

Looking ahead, the Centre for Tropical Health and Emerging Diseases will continue to focus on research that is collaborative, impactful, and responsive to a rapidly changing world. We remain committed to advancing knowledge, informing policy and practice, and contributing to healthier futures for communities affected by tropical and emerging diseases.



Centre Profile

The Centre for Tropical Health and Emerging Diseases (CTHED) is a multidisciplinary initiative addressing tropical diseases in the context of poverty and climate change through basic and translational research.

Financed by the Council of the Queensland Institute of Medical Research for five years (1 July 2024 – 30 June 2029), CTHED was officially launched on 27 September 2024 by Her

Excellency the Honourable Dr Jeannette Young AC PSM, Governor of Queensland. CTHED is a virtual cooperative centre led by QIMR Berghofer, and uniting researchers from UQ, JCU, and affiliated partners across the Asia-Pacific. Operating through a hybrid model, the Centre hosts regular meetings, workshops, and an annual forum, and aims to support collaborative research, professional development, and regional capacity building through seed funding, exchanges, and training.





Scope

The Centre aims to strengthen and expand research efforts to address the health impacts of climate change and improve health outcomes. CTHED aims to tackle complex tropical health challenges through a collaborative, multi-institutional approach that enhances impact beyond individual efforts. The Centre addresses future issues like climate change-driven disease transmission, focusing on both traditional and emerging tropical regions.

Central to its mission is maintaining Queensland's leadership in tropical health to secure relevant funding and recognition. By strengthening local partnerships and building national and international collaborations, the Centre is committed to engage with the Australian Centre for Disease Control and pursue major international grants.

Collaborations with institutions locally, nationally and internationally will help reduce costs and unlock further funding opportunities, creating a sustainable model where success breeds future success.





Centre Objectives

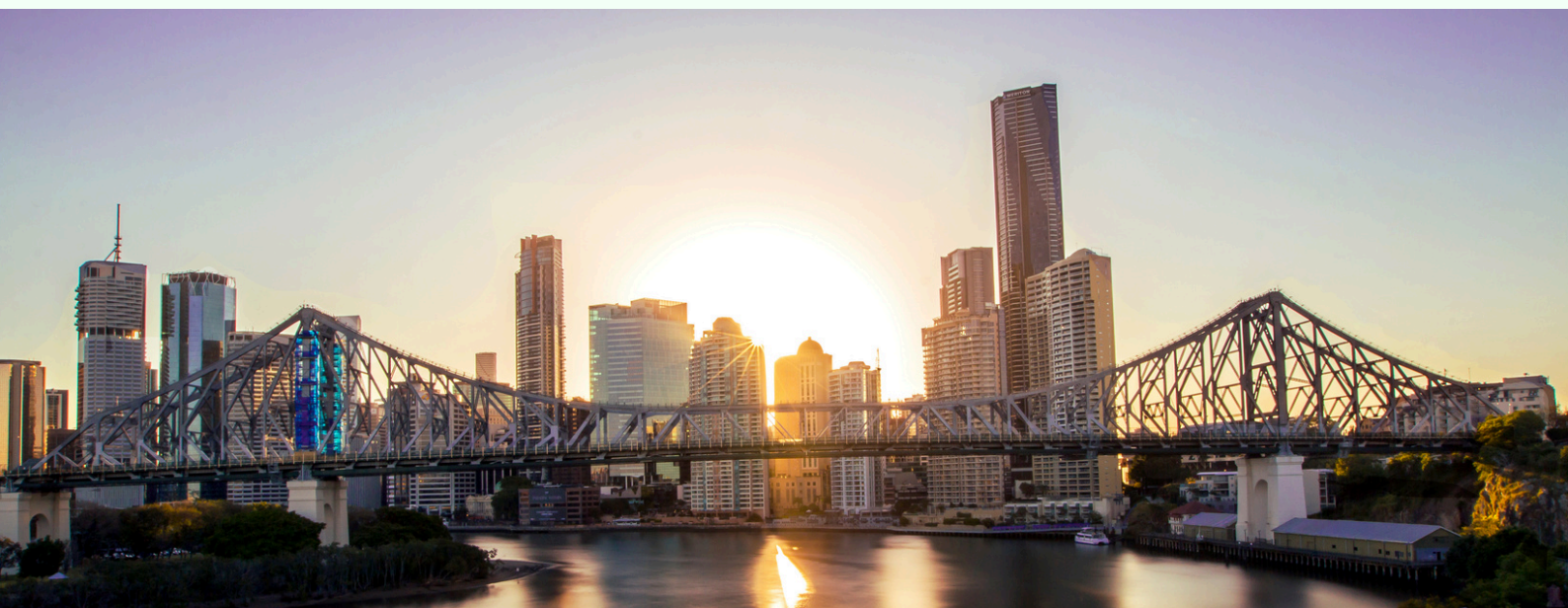
The objectives of the Centre align directly with QIMR Berghofer's Strategic Plan 2022–2026, which emphasises discovery, sustainability, and impact.

The Centre aims to build a *high-quality, critical mass* of internationally recognised research capability in tropical health and emerging diseases, create a collaborative and virtual research space that attracts external partners from across Australia and internationally, and *advance impactful research translation* to improve health outcomes for communities across the globe.

CTHED is committed to building partnerships and collaborations with academia, non-profit organisations, and public health institutions, and designing high-impact research initiatives.

The Centre provides a platform for researcher exchange, funds tropical health accelerator projects, conducts and communicates research, and offers training and capacity building for members.

CTHED also prepares competitive funding applications, organises and runs annual meetings, and recruits talented staff and students to ensure long-term growth and sustainability.





Highlights

Establishing the Centre

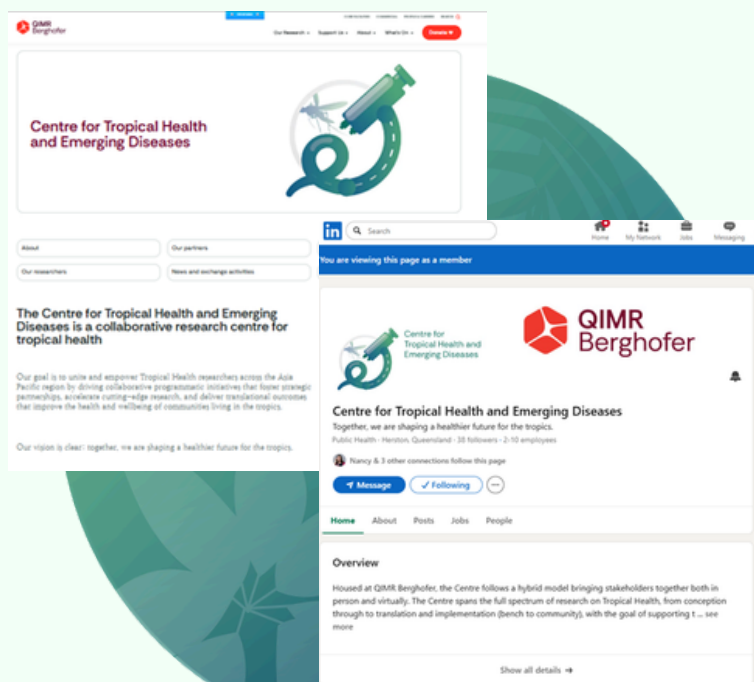
A logo, website, and communications strategy were successfully launched, reflecting the Centre's identity and alignment with QIMR Berghofer.

Critical operational progress

Documents were created and approved by QIMR Berghofer:

- Governance structure
- Seed funding guidelines
- Risks and controls
- Communications strategy

The website was created and our social media accounts were activated.



Forming foundational partners

JCU and UQ are our foundational partners, which underpins the tri-partite partnership sustaining the Centre.



Vision & Mission



Vision

Together, we are shaping a healthier future for the tropics.



Mission

To unite and empower tropical health researchers across Australia and the Asia-Pacific region by driving collaborative initiatives that foster strategic partnerships, accelerate cutting-edge research, and deliver translational outcomes that improve the health and wellbeing of communities living in the tropics.



Our Team



Professor Darren Gray
Founding Director



Dr Adrian Wiegman
Centre Manager



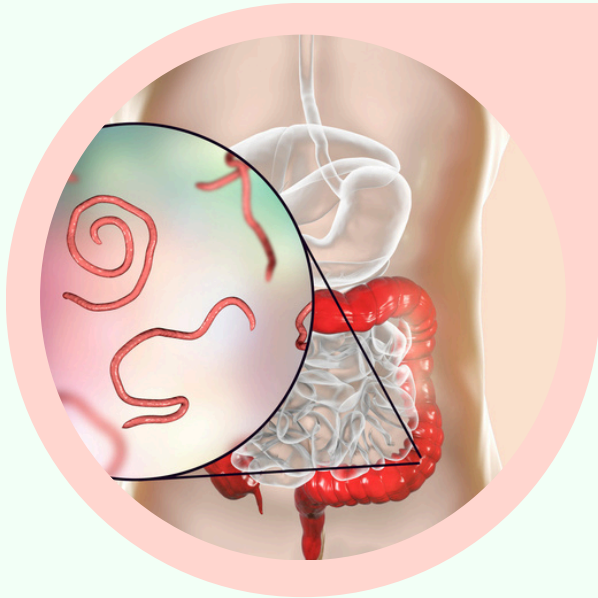
Dr Silvia Luiza Saggiomo
Communications Officer



Research Themes

Diagnostics development

This theme focuses on improving the detection, identification, and understanding of parasitic infections that disproportionately affect tropical and low-resource settings. Work includes developing sensitive, field-ready diagnostic tools, enhancing laboratory capacity, and refining parasitological methods to support disease control and elimination efforts.



Disease surveillance and mapping

Surveillance and geospatial mapping activities aim to strengthen early detection, monitor disease transmission patterns, and identify high-risk communities. These tools support real-time decision-making for public health agencies and inform targeted interventions, outbreak response, and long-term disease control strategies.





Research Themes

Water, Sanitation And Hygiene (WASH) studies

WASH research examines how improved access to clean water, sanitation, and hygiene practices can reduce transmission of infectious diseases. Studies evaluate behaviour-change programs, community water and sanitation systems, and integrated WASH-plus-health interventions that break cycles of disease and poverty.



Aboriginal and Torres Strait Islander health

This theme focuses on supporting health equity for Aboriginal and Torres Strait Islander peoples through culturally informed research, community engagement, and capability strengthening. Work includes co-designed studies addressing infectious diseases, environmental health, and community-identified health priorities.



Research Themes

Community field studies and trials

This theme supports implementing research directly within affected communities. Field studies and clinical or operational trials generate real-world evidence on the effectiveness, feasibility, and acceptability of interventions. This community-based approach ensures that solutions are locally appropriate, scalable, and sustainable.



Development and evaluation of vaccines and therapeutics

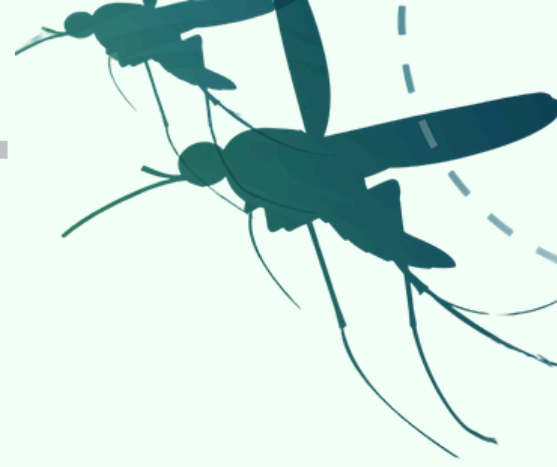
CTHED aims to contribute to the discovery, development, and testing of new vaccines, drugs, and treatment strategies for tropical and emerging diseases. This includes laboratory research, pre-clinical testing, and collaboration with clinical partners to evaluate the safety and impact of candidate interventions.



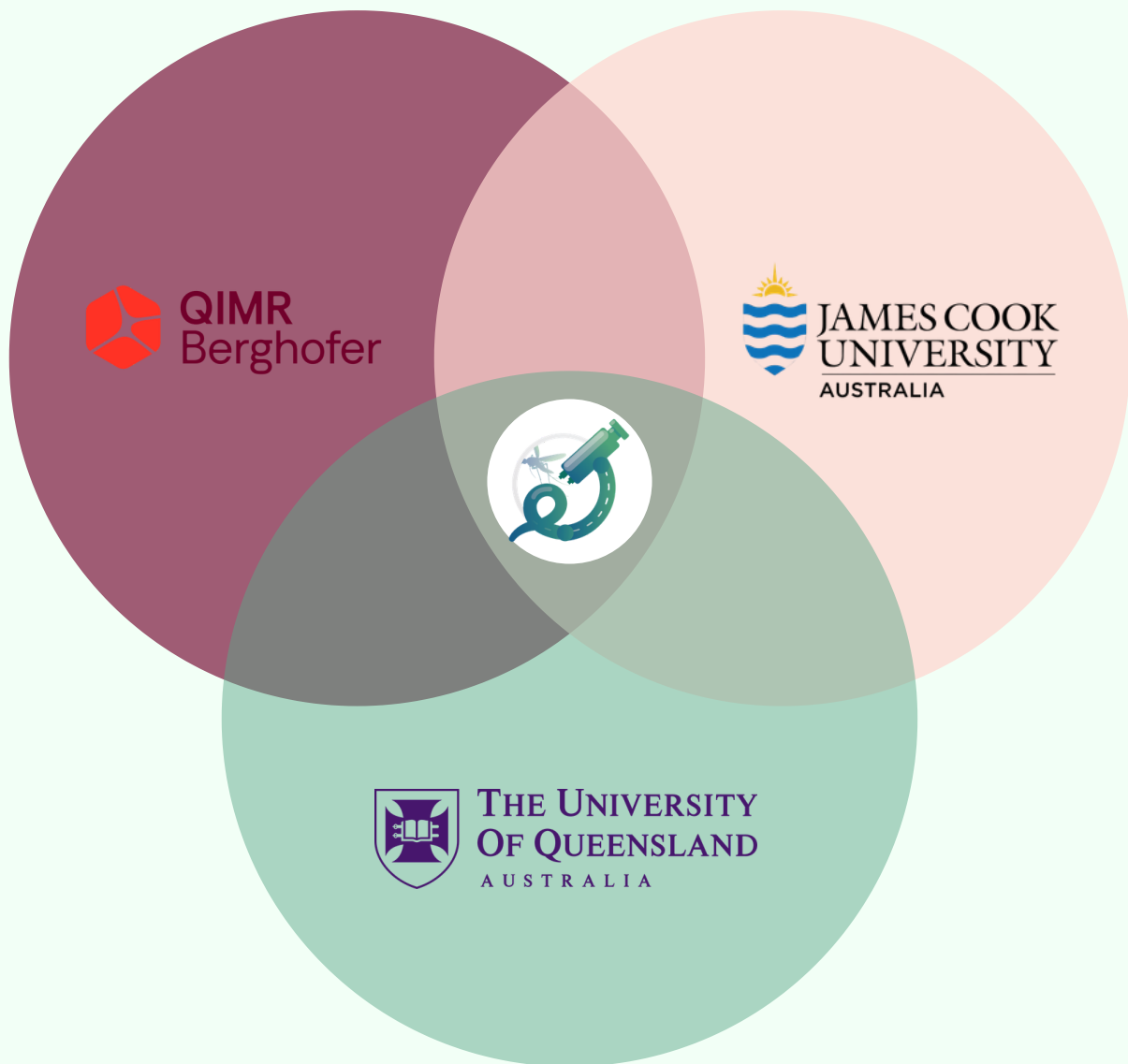
PC3 Insectary Facility, QIMR Berghofer



Founding Members



Thanks to our founding members, the Centre has a total of 64 researchers, including Higher Degree by Research students, across QIMR Berghofer, James Cook University, and The University of Queensland.



Members

Memoranda of Understanding were signed with James Cook University, The University of Queensland, Mahidol University, and Sarawak Infectious Diseases Centre.

These will provide further opportunities for collaboration and research exchange.



Mahidol University
Wisdom of the Land



Sarawak Infectious
Disease Centre



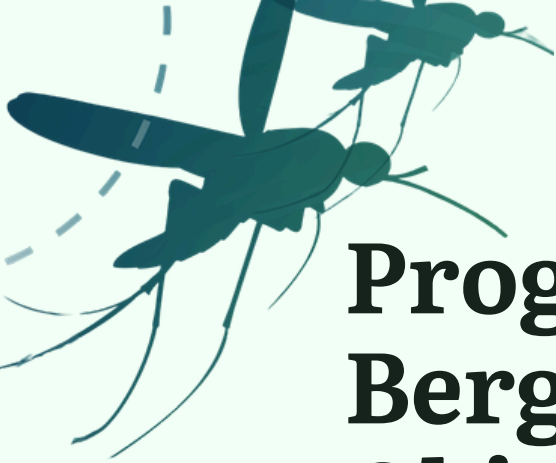
JAMES COOK
UNIVERSITY
AUSTRALIA



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA



QIMR
Berghofer



Progress Against QIMR Berghofer's Strategic Objectives



5

Year strategic
partnership with JCU



1

Annual meeting



3

Memoranda of
Understanding



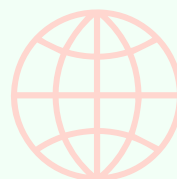
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Website



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Webinars



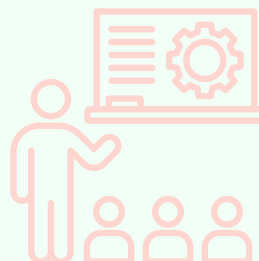
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Social media
channels



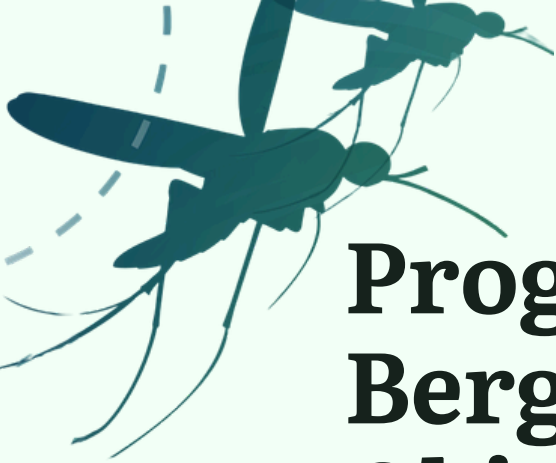
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Centres of Research
Excellence (CRE) grant



5

Workshops



Progress Against QIMR Berghofer's Strategic Objectives

The Centre's establishment and initial operations are directly mapped to QIMR Berghofer's three Strategic Objectives, ensuring our growth contributes to the Institute's broader impact on Queensland and global health.

1. Discovery

Supporting ground-breaking research discoveries

The Centre aims to support innovative and impactful medical research focused on health challenges relevant for Queenslanders and beyond.

We help promote research arising from social and environmental factors.

We support researchers so world-class research at QIMR Berghofer's state-of-the-art facilities.



Discovery

Innovative Solutions for Scabies Control

Prof Katja Fischer leads pioneering research to improve the diagnosis, treatment, and biological understanding of scabies, one of the world's most neglected tropical diseases. Her work focuses on practical tools that could transform care in low-resource and high-burden settings.

Her team is developing the first **rapid antigen test (RAT) for scabies**, enabling

point-of-care diagnosis, and a novel single-application topical treatment designed to kill all life stages of the mite, prevent secondary bacterial infections, and relieve severe itch. She also **leads a AUD \$1.4M international scabies microbiome consortium**, investigating how interactions between mites and skin bacteria influence disease severity.

Recent publications highlight the translational impact of this work. In *Phytomedicine* (2025), her team identified **mānuka oil β-triketones as promising new scabicides and the first novel candidates in over 30 years**. It outperformed ivermectin and permethrin, the current gold-standard treatments in laboratory testing. A complementary single-dose combination therapy is now in press in the *Journal of the American Academy of Dermatology*. Prof Fischer also co-authored the first *Nature Reviews Disease*



Prof Katja Fischer



Discovery

Primers article on scabies, a landmark global reference covering burden, biology, diagnosis, and control.

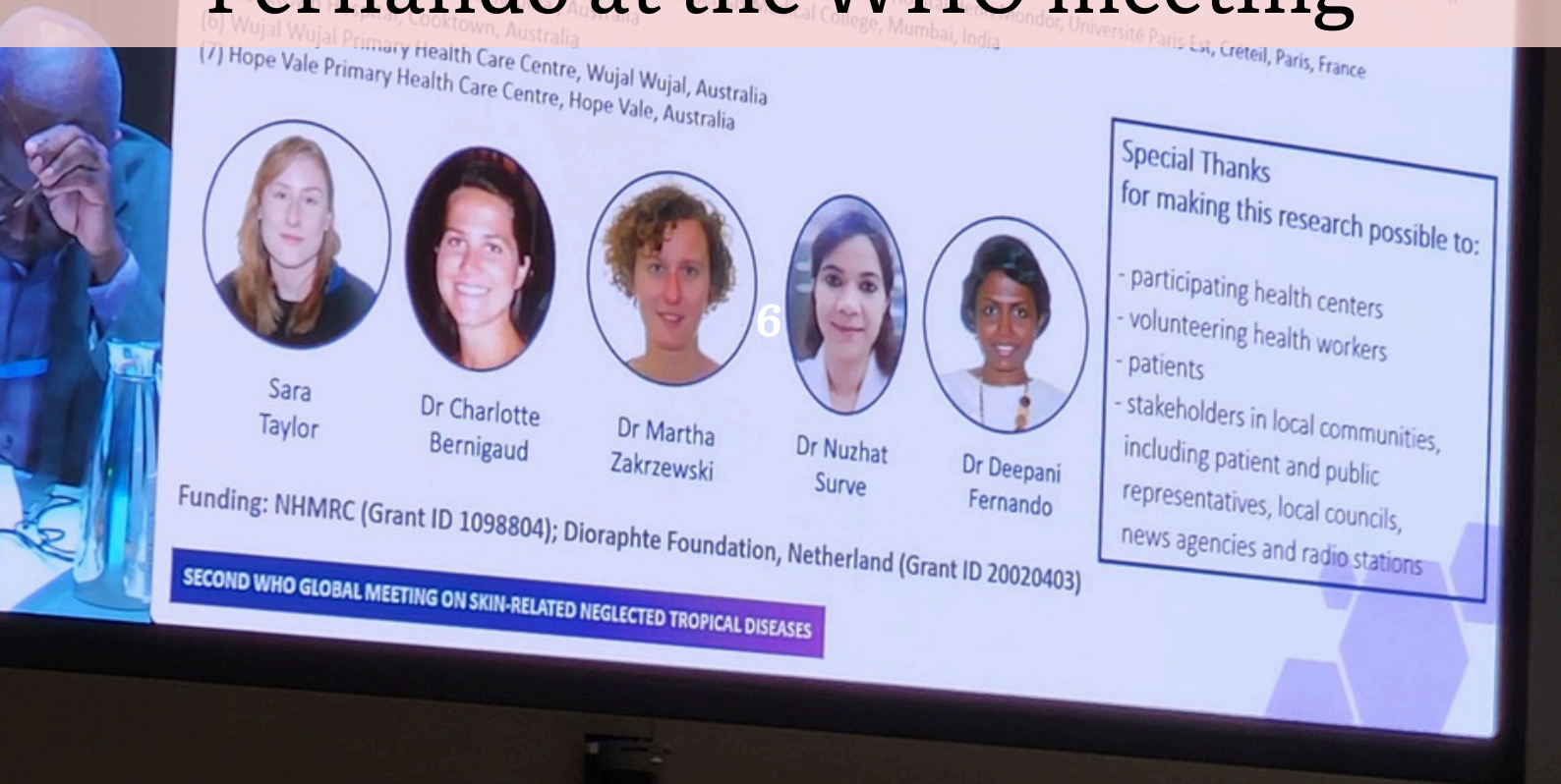
In 2025, she was appointed **Co-Chair of the World Health Organisation (WHO) Discovery Research Working Group for Skin Neglected Tropical Diseases**, recognising her leadership in the field.

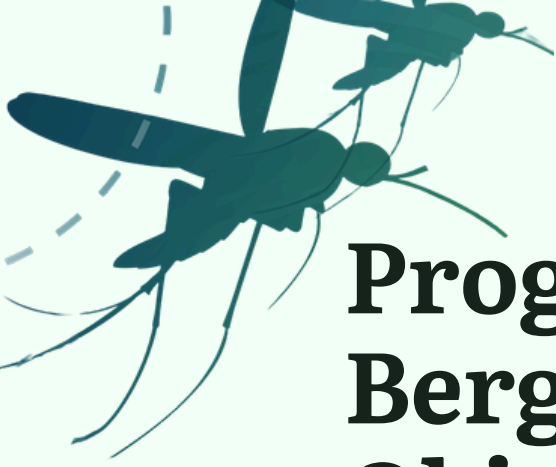
Beyond research, Prof Fischer is committed to community and workforce development, **securing over AUD \$140K to promote careers in 'Health and Sciences'** among remote school students, which include hands-on workshops locally at schools and work experience at QIMR Berghofer. To date, she has organised four outreach campaigns and hosted over 25 Indigenous students from Far North Queensland for fully sponsored 1-week research placements at QIMR Berghofer.

Through innovation, global leadership, and community engagement, Prof Fischer's work is helping reshape the future of scabies control.



Prof Katja Fischer and Dr Deepani Fernando at the WHO meeting





Progress Against QIMR Berghofer's Strategic Objectives

2. Sustainability

Promote a world-class, collaborative and sustainable research environment

The Centre brings together high-performing researchers, experts, and professional teams who are aligned in their goals to create value and impact.

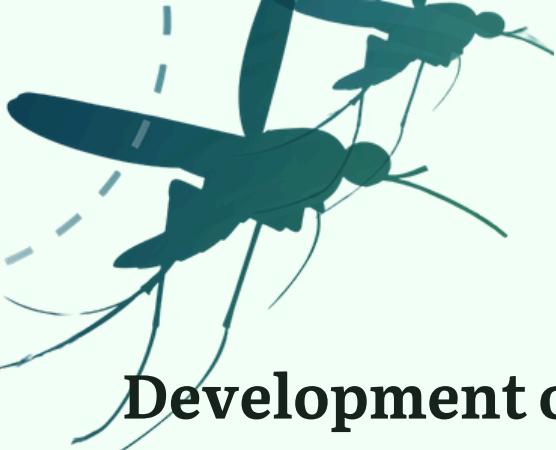
Governance framework

CTHED successfully built a robust governance framework, ensuring accountability, transparency, and alignment with QIMR Berghofer's "working better together" operating model.

Comprehensive risk assessment

A thorough risk assessment was completed, enabling the Centre to identify, monitor, and mitigate potential strategic and operational risks. This will ensure resilience as the Centre grows.





Sustainability

Development of Partnerships

Strategic partnership with JCU

CTHED formalised a five-year Strategic Partnership Agreement with JCU, leveraging complementary expertise in tropical health, infectious diseases, parasitic worms, vaccine development, and mental health.

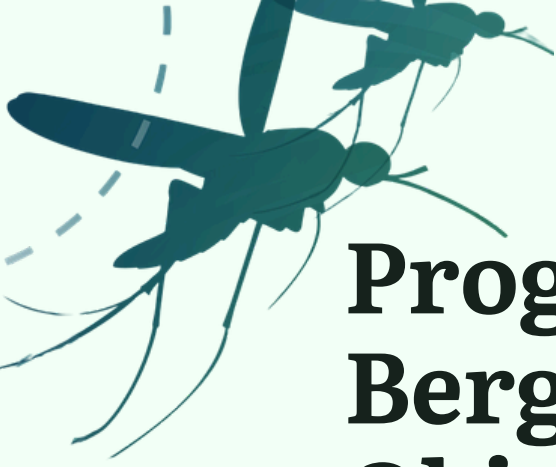
The agreement enables joint research, clinical trial collaboration, joint PhD supervision, reciprocal facility use, and exchange of staff and students.

New strategic agreements

Memoranda of Understanding with Mahidol University (pictured) and Sarawak Infectious Diseases Centre (SIDC) have been signed.

A new Memorandum of Understanding with Universiti Sains Malaysia has been drafted and is awaiting signing.





Progress Against QIMR Berghofer's Strategic Objectives

3. Impact

Make a positive impact on the health of Queenslanders and beyond

CTHED aims to understand and tackle health and clinical challenges for Queensland and around the Asia-Pacific region through engagement with researchers, health consumers, citizen science projects, amongst other initiatives.

We are helping QIMR Berghofer build on their expertise and increase research translation and commercialisation opportunities.





Impact

Leadership and Innovation in Mosquito Genomics & Citizen Science for Better Australian Public Health

2025 consolidated Assoc Prof Gordana Rašić's as a nationally relevant leader in innovative mosquito surveillance and control, focusing on strengthening Australia's preparedness for emerging mosquito-borne disease threats. This was underpinned by the **award of two major competitive grants**, representing a



Assoc Professor
Gordana Rašić

combined investment of over AUD \$4M.

The first was a **Medical Research Future Fund (MRFF) Genomics Health Futures Grant**, supporting a large-scale, partnership-driven program integrating mosquito and arbovirus genomics with public health action through community engagement and science education. The second was an **Ideas Grant** (PORTS: Precision Optimisation for Resilient Targeted Surveillance), focused on transforming mosquito vector biosecurity at first points of entry (seaports and airports).

A defining innovation of Assoc Prof Rašić's 2025 portfolio is the strategic integration of genomics and citizen science into a surveillance system at unprecedented scale, enabling communities to act as partners in early warning and response to exotic mosquitoes and arboviruses.

Impact

In collaboration with Metro South Health, Brisbane South State Secondary College, and Queensland University of Technology, the MRFF-funded program aims to establish a nationally scalable model for early detection and response to exotic mosquitoes and circulating mosquito-borne viruses, accelerating translation of evidence into practice and supporting long-term system resilience.

In parallel, PORTS hopes to deliver a significant leap forward in Australia's vector biosecurity capability, advancing early warning and containment of exotic mosquitoes escaping biosecurity controls around seaports and airports. By combining mosquito genomics, advanced simulation modelling, and distributed community participation, PORTS has strong potential to influence policy and operational frameworks, with partners including Queensland Health (Metro South Health), University of California, Berkeley, and Brisbane City Council.

Together, these programs reinforce Assoc Prof Rašić's role in shaping Australia's next-generation approach to mosquito-borne disease prevention and biosecurity.



Impact

Advancing Parasitic Control Through Research, Education & Partnership

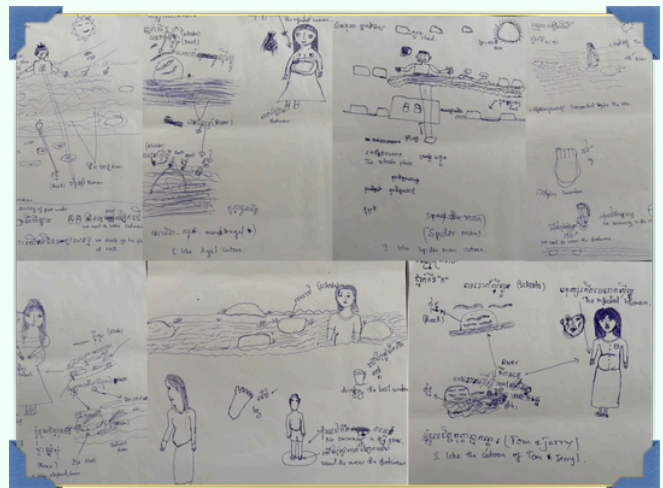
Dr Catherine Gordon's research focuses on parasitic worm infections, zoonotic transmission, health education, and qualitative methods to inform disease control and elimination strategies.

Dr Gordon played a key role in the **eASIA Mekong Elimination Project**, leading a regional workshop in Cambodia that mapped progress and finalised baseline planning for forthcoming field trial

activities. In Lao People's Democratic Republic, she performed pilot fieldwork with local teams to support the development of the **Magic Glasses health education program**, combining parasitological sampling, community questionnaires, and formative research



Dr Catherine Gordon





Impact

to ensure the intervention's cultural relevance and effectiveness. This work included the collection of stool samples from dogs, bovines (water buffalo and cattle), cats, and pigs to investigate zoonotic transmission pathways.

In 2025, Dr Gordon also contributed to a strong body of published research. Her work includes papers on strongyloides and zoonotic parasitic infections, such as “New insights into infant strongyloidiasis in Papua New Guinea” (medRxiv, 2025), a review on Strongyloides fuelleborni in Trends in Parasitology, and a study on zoonotic soil-transmitted helminths in Gabon, published in Emerging Infectious Diseases. She also received the award for best review for “Schistosomiasis with a focus on Africa,” published in Tropical Medicine and Infectious Disease.

Beyond research, Dr Gordon remains strongly committed to capacity building and outreach. She contributed to hands-on parasitology demonstrations during community engagement activities in Cloncurry and delivered practical training as part of the Australian Society of Parasitology's Concepts in Parasitology course, supporting skills development in diagnostic and molecular techniques.



Engagement

Workshops

We successfully organised 5 workshops to engage with JCU, which happened in Cairns, Townsville and Brisbane.

Researchers visited facilities and infrastructure available at each location to better understand strengths, weaknesses, opportunities and threats. Action items and immediate next steps were identified to drive the collaboration forward.





Engagement

Seminars



“Beyond nutrient provisioning: symbiont influences on host physiology in *Rhodnius prolixus*, a vector of the Chagas disease parasite *Trypanosoma cruzi*”

Assoc Prof Kevin Vogel
University of Georgia, USA

“Insights from malaria vector control studies in Papua New Guinea”

[Available on our YouTube Channel](#)



Assoc Prof Stephan Karl
JCU, Australia



Assoc Prof Kevin Vogel

University of Georgia, USA





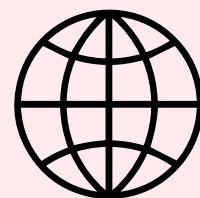
Engagement

Social Media

A logo, website, and communications strategy have been implemented to strengthen CTHED's visibility. The Centre has also developed Key Performance Indicators to measure impact and progress against strategic goals.

We successfully launched our website, which was incorporated within QIMR Berghofer's, and four social media channels in November 2025.

Profiles on LinkedIn, Instagram, Facebook and YouTube were created to better engage with current stakeholders and members and start conversations with interested external parties around the globe.



Website and Social Media





Engagement

Removed due to confidentiality.





Engagement

Social Media

Within 6 weeks of starting our LinkedIn presence, the Centre demonstrated strong early performance and audience engagement relative to its size and stage of development. This reflects both the relevance of CTHED's mission and the effectiveness of its targeted communications strategy.

CTHED had over 12,000 impressions and 277 post engagements across 19 posts, suggesting that our content resonates with our audience, despite operating with a substantially smaller follower base than more established institutions.

Overall, CTHED's LinkedIn performance indicates a strong foundation for continued growth, with early metrics suggesting that we are successfully establishing a digital presence and engaging meaningfully with the tropical health and emerging diseases community.

Furthermore, these results were achieved entirely through organic engagement and are expected to further improve as institutional communications support is implemented.



Financial Report

Removed due to confidentiality.

Financial Report (continued)

Removed due to confidentiality.

Our People



QIMR
Berghofer

Fiona Amante
Bridget Barber
Cameron Bishop
Pengfei Cai
Agnes Carolin
Christian Engwerda
Benjamin Crawford
Deepani Fernando
Katja Fischer
Catherine Gordon
Mary Lorraine Mationg
Nirupama Nammunige
Severine Navarro
Quan Nguyen
Wilson Nguyen
Jue-Sheng Ong
Suzy Ossipow
Elina Panahi
Prakrithi Pavithra

Jeremy Gower
Melissa Graham
Darren Gray
David Harrich
Leon Hugo
Adrian Ilich
Brian Johnson
Min-Hsuan Lin
Pramila Maniam
Hong You
Daniel Rawle
Hayden Rohlf
Silvia Saggiomo
Shubhangi Seth
Fasil Shiferaw
Nuzhat Surve
Adrian Wiegman
Alyssa Peterson
Gordana Rasic



JAMES COOK
UNIVERSITY
AUSTRALIA

Richard Bradbury
Roslyn Hickson
Stephan Karl
Tessa Knox
Andreas Kupz
Alex Loukas
Amanda Murphy
Roland Ruscher
David Whitmore



THE UNIVERSITY
OF QUEENSLAND
AUSTRALIA

Antje Blumenthal
Denise Doolan
Luis Furuya-Kanamori
Paul Jagals
Gail Williams
Malcolm Jones
Colleen Lau
Dung Phung
Benn Sartorius

QIMR Berghofer buildings

