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The Australian Society for Parasitology Inc.

NEWSLETTER

Volume 37 Issue No.1 October 2026



IMAGE Little Penguin, Lutruwita (Tasmania) (image copyright Jaslyn Allnut, 2026)

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NEWSLETTER

Volume 37 Issue No.1 October 2026

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From the President's Desk



Dear Members of the Australian Society for Parasitology,

This week, we will hold the first meeting of the incoming ASP Council. I would like to begin by welcoming our newly elected Council members, including President-Elect Professor Katja Fischer; Dr Deborah Holt, representing the Northern Territory; Dr Di Barton, representing South Australia; and Professor Denise Doolan, our Fellows Representative. I look forward to working closely with Katja as President-Elect and out new council members. As I enter my final year as President, I am confident that the Society will be in very capable hands when the time comes to hand over. I look forward to supporting Katja as Vice-President and to the contributions she will make to the Society as ASP President.

My sincere thanks to council members who concluded their terms at the Annual General Meeting on the Gold Coast. In particular, I would like to thank Professor Danny Wilson, who completes his term as Vice-President, following his service as President and President-Elect. Danny has been an invaluable source of guidance and support throughout my first year as President, providing continuity for the incoming Council. His leadership, including his work negotiating our new publishing contract with Elsevier, has made an important contribution to the Society and its journals. I am deeply grateful for his generosity and commitment. I also thank Professor Robin Gasser, our outgoing Fellows Representative, and Sonia Frolich and Kamil Braima, our outgoing representatives for South Australia and the Northern Territory, respectively. Thank you all for your service and contributions to Council.

From the President's Desk continued

I would like to again acknowledge the organising committee for this year's Conference on the Gold Coast, particularly co-chairs Danielle Stanisic and Swaid Abdullah. They delivered a wonderful, well-attended conference that showcased the strength and international standing of Australian parasitology research. As always, it was also a thoroughly enjoyable opportunity to reconnect with colleagues and friends. I look forward to our next Annual Conference in Hobart in 2027 and encourage you all to join us, submit an abstract and share your research.

The Gold Coast conference also provided an opportunity to recognise the achievements of our award recipients: Professor Darren Gray, recipient of the Bancroft-Mackerras Medal; Professor Katja Fischer, recipient of the Bridget Ogilvie Medal; and Dr Emily Francis, recipient of the JFA Sprent Prize. I extend my warm congratulations to each of them and encourage members to read more about their work in this newsletter.

We also welcomed four new Fellows of the Australian Society for Parasitology: Dr Di Barton, Professor Brian Cooke, Professor Terry Spithill and Professor Katja Fischer. Their Fellowship citations are included in this issue, and I congratulate each of them on this recognition.

Alongside these celebrations, we mark with sadness the passing of several eminent members of the parasitology community: Dame Bridget Ogilvie, Dr David Leathwick and Professor Robert Sinden. The presentation of this year's Bridget Ogilvie Medal was especially poignant following Dame Ogilvie's passing. I greatly appreciated Professor Karen Day's tribute at the conference, which reflected on Dame Ogilvie's remarkable research career and her tireless commitment to mentorship, education, outreach and widening engagement with parasitology. Her legacy illustrates why the Society honours her through one of its most prestigious awards. We remember all three colleagues with gratitude and extend our condolences to their families, friends and collaborators.

As I enter my final year as ASP President, I would like to acknowledge what a privilege it is to represent this Society and serve on Council. I am continually humbled and inspired by the commitment of our members, from PhD students and early-career researchers to established colleagues and Fellows, and by everyone who contributes to the Society's activities and operations. Your enthusiasm and dedication underpin the strength of Australian parasitology on the national and international stage.

That commitment was exemplified by the Sydney ICOPA 2030 bid team, led by Professor Kevin Saliba and Professor Shokoofeh Shamsi. I had the privilege of attending ICOPA in Montréal and seeing their efforts to represent our Society and Australian parasitology. While I congratulate the successful Malaysian bid team and look forward to ICOPA 2030 in Kuching, I could not be prouder of the work undertaken by Kevin, Shokoofeh and the entire Sydney bid team. I thank them for the tremendous effort they invested over several years and for the way they represented our community.

I look forward to the coming year, to working with the incoming Council and to continuing to represent our vibrant Society. I hope to catch up with many of you, hear more about your research, teaching and outreach, and see as many of you as possible at our conference in Hobart. Thank you for the enthusiasm, generosity and shared commitment that make the ASP such a special community.

Best wishes,

Prof. Aaron Jex, WEHI

President of the Australian Society for Parasitology

www.parasite.org.au

www.facebook.com/ASParasitology

https://www.linkedin.com/company/the-australian-society-for-parasitology/

https://www.youtube.com/user/ASPParasiteNetwork

https://shows.podcastle.ai/show/what-s-eating-you-vr7KKXOx

Danny Wilson thanked for services to the ASP by Aaron Jex at the 2026 ASP Annual Conference.



2026 Australian Society for Parasitology Annual General Meeting

The 2026 Australian Society for Parasitology Annual General Meeting was held as a hybrid face-to-face and online meeting on Wednesday 1 July 2026 at 4pm AEST.

The following business was conducted at the 2026 Annual General Meeting of the Society. The minutes and reports for all ASP meetings are available on WildApricot/members/resources section. To access them please login to your Wildapricot account (https://asp.wildapricot.org/memberresources) and check the members resources or email the Secretary (secretary@parasite.org.au):

- received the Society's financial statement, and audit report, for the last reportable financial year;
- presented the financial statement and audit report to the meeting for adoption;
- elected members of the Council (see positions vacant and nominating for ASP Council https://www.parasite.org.au/the-society/join-the-asp-council/);
- appointed an auditor or an accountant for the present financial year;
- announcement of ASP Awards and Prizes;
- receipt of reports from Editors, Convenors, Archivists, Secretariat and subcommittees; and
- review and debate other actions or decisions by the Council.

Congratulations to the following ASP Council representatives who were elected at the ASP AGM on Wednesday 1 July 2026 400pm AEST.

President, 2026
Aaron Jex was elected into the position of President August 28, 2024. He was nominated by ASP members Clare Anstead and Robin Gasser.

Treasurer, 2026
Samantha Emery-Corbin was elected into the position of Treasurer, 2 July 2025. She was nominated by ASP members Aaron Jex and Clare Anstead.

Executive Secretary, 2026
Jake Baum was elected into the position of Executive Secretary, 2 July 2025. He was nominated by ASP members Aaron Jex and Clare Anstead.

President-Elect, 2026
Katja Fischer was elected into the position of President-Elect August 1, 2026. She was nominated by ASP members Aaron Jex and Danny Wilson.

Victorian State Representative, 2026
Patsy Zendejas has been elected into the position of Victorian State Representative, 1 July 2026. She was nominated by ASP members Aaron Jex and Clare Anstead. .

New South Wales State Representative, 2026
Claire Sayers has been has been elected into the position of New South Wales State Representative, 1 July 2026. She was nominated by Kate Hutson and Grace Peters.

Queensland State Representative, 2026
Deepani Fernando has been has been elected into the position of Queensland State Representative, 1 July 2026. She was nominated by ASP members Grace Peters and Sarah Preston.

Northern Territory Representative, 2026
Deborah Holt has been elected into the position of Northern Territory Representative, 1 July 2026. She was nominated by ASP members Kamil Braima and Thien Phuc Tran.

Tasmanian State Representative, 2026
Kate Hutson has been elected into the position of Tasmanian State Representative, 1 July 2026. She was nominated by ASP members Breanna Knight and Haylee Weaver

Australian Capital Territory State Representative, 2026
Brendan McMorran has been elected into the position of ACT State Representative, 1 July 2026. He was nominated by ASP members Aaron Jex and Kate Hutson.

South Australia State Representative, 2026
Dianne Barton has been elected into the position of South Australian State Representative, 1 July 2026. She was nominated by ASP members Ian Beveridge and Shokoofeh Shamsi.

Western Australia State Representative, 2026
Breanna Knight has been elected into the position of Western Australia State Representative, 1 July 2026. She was nominated by ASP Members Kate Hutson and Deepani Fernando.

ASP Student Representative, 2026
Grace Peters, PhD candidate at UNSW, has been has been elected into the position of ASP Student Representative, 1 July 2026. she was nominated by ASP members Kate Hutson and Claire Sayers.

ASP Fellows Representative, 2026
Denise Doolan has been elected into the position of ASP Fellows Representative, 1 July 2026. She was nominated by ASP members Robin Gasser and Deepani Fernando.

2026 Bancroft-Mackerras Medal winner

Congratulations to Professor Darren Gray, winner, 2026 Bancroft-Mackerras Medal of The Australian Society for Parasitology.







Above Darren is pictured with the team from The Population Health Program at QIMR Berghofer from left to right Lucy Zacchi, Deepani Fernando, Suzy Ossipow, Darren, Catherine Gordon, Silvia Saggiomo, Grace John, Fasil Wagnew, and Jessica Scott.

Professor Darren Gray has just been awarded the prestigious 2026 Bancroft-Mackerras Medal for research excellence from The Australian Society for Parasitology.

Professor Darren Gray, an infectious disease epidemiologist, is Program Director of the Population Health Program at QIMR Berghofer. He is also Founder and Director of the Centre for Tropical Health and Emerging Diseases, a collaborative centre that brings together researchers, clinicians, public health practitioners and partners across Australia and the Indo-Pacific region to address tropical diseases, emerging infections, global health challenges and health security through research, training, and partnerships.

Professor Gray currently leads a research program that investigates the transmission and control of tropical infectious diseases and diseases of poverty, including some of the most prevalent and important infections that cause much suffering and economic loss worldwide. He aims to develop new public health interventions against these diseases that will lead to their sustainable control and eventual elimination.

He is the former Acting Director of the National Centre for Epidemiology & Population Health/Research School of Population Health and Head of the Department of Global Health at the Australian National University.

The Award recognises Professor Gray's important contribution to health in the tropics, including: Transforming schistosomiasis control policy in China; Production of innovative health-education interventions throughout South East Asia; Helping to eliminate Helminth disease in the Lower Mekong (HELM); and Advancing strongyloidiasis elimination in Indigenous communities.

Congratulations 2026 JFA Sprent Prize Winner

Congratulations to Dr Emily Francis, winner of the 2026 John Frederick Adrian Sprent Prize from The Australian Society for Parasitology.



2026 John Frederick Adrian Sprent Prize winner Dr Emily Francis, from The University of Sydney

Dr Emily Francis is a veterinary parasitologist and Lecturer at the University of Sydney. She completed her PhD at the University of Sydney in 2024. Her research centres on the development and application of molecular diagnostic tools to better understand gastrointestinal nematodes and anthelmintic resistance in livestock. Drawing on her rural upbringing in New South Wales, she is committed to bridging the gap between research and on-farm decision-making, ensuring that advances in parasite diagnostics translate into tangible benefits for producers. Her work has contributed to the development of innovative surveillance approaches that she hopes will one day support more sustainable parasite control in Australia.

The John Frederick Adrian Sprent Prize is a substantial prize presented to a Student member of the Society for an outstanding thesis in Parasitology for which the PhD degree was awarded during the previous three years.

Congratulations Dr Emily Francis!

2026 JFA Sprent Prize Winner







2026 John Frederick Adrian Sprent Prize winner Dr Emily Francis, from The University of Sydney received the prize from ASP President, Aaron Jex and gave a wonderful oration of her work to a packed auditorium at the 2026 ASP Annual Conference, at the Gold Coast.

2026 Bridget Ogilvie Medal winner

Congratulations to Katja Fischer who was awarded the 2026 Bridget Ogilvie Medal of the Australian Society for Parasitology

Professor Katja Fischer is an internationally recognised leader in scabies research and Senior Group Leader of the Scabies Laboratory at QIMR Berghofer, Brisbane. Her pioneering research has generated critical insights into the biology of scabies and translated these discoveries into innovative approaches for diagnosis, treatment, and disease control. Her work is improving health outcomes for vulnerable communities and helping to reduce the global burden of scabies and its severe secondary bacterial infections.

The Medal recognises Professor Katja Fischer's important contribution to community education in Parasitology, including: Building Indigenous Capability in Parasitology Research; Parasitology education with the Australian Society for Parasitology Concepts in Parasitology Course and National Science Week events; Parasitology Education for Orange Sky Laundry leading to defining laundry conditions that kill scabies mites and eggs; Parasitology education for Health Care Professionals and Stakeholders in remote communities; and Parasitology education for Artists in Hope Vale, QLD.

Professor Fischer's research and education activities are important because, for Indigenous Australians living in remote community settings, extremely overcrowded living conditions and infrastructure problems result in poor sanitation, are a significant factor in the transmission of many parasitic diseases.

Congratulations Katja!

The Bridget Ogilvie Medal of the Australian Society for Parasitology is an award for an Ordinary member or Fellow of the ASP who, in the opinion of the selection committee appointed by Council, has made an outstanding contribution to parasitology education. https://www.parasite.org.au/awards/the-bridget-ogilvie-medal/









2026 Bridget Ogilvie Medalist, Katja Fischer receiving her award from Aaron Jex at 2026 ASP Conference.

2026 ASP Fellowship awarded to Katja Fischer

Congratulations to Katja Fischer 2026 Fellow of the Australian Society for Parasitology Inc., awarded at the 2026 ASP AGM. The citation for Katja's Fellowship is published below

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A/Prof. Katja Fischer is a senior group leader and global authority in acarology with >22 years in scabies research. She received the Bancroft-Mackerras Medal (2020), QIMRB Bancroft Medal (2023), and was invited to apply for a Level E conjoint role at UQ (2025).

She has led a pioneering research program that transformed scabies from an observational condition into a molecularly defined disease, shaping the global scabies research agenda. Of her >140 peer-reviewed publications (>88% in Q1 journals), >80 relate to this program; she is the first/senior author on >75% of those, with one-third in top-ranked journals. She secured ~$13M in research funding (~98% as CIA/PI), including four major grants since 2019: NHMRC Project (CIA), NHMRC SRF (2019), and two Dioraphte Foundation grants (2020, 2024). Her work is cited in >40 policy documents. As the most cited author in scabies basic research (Web of Science), I rank in the top 0.1% on Expertscape and top 0.5% for NTDs (ScholarGPS). She co-chair WHO Discovery Research Working Group (skin NTDs, 2025), co-founded IACS, and has supervised 15 PhDs, 16 Masters/Honours, and 7 postdocs.

At her program onset, virtually no molecular tools existed. She addressed this by, (i) developing and maintaining the world's only porcine scabies model since 2006 (the critical resource for advancement of scabies pathophysiology and enabling breakthroughs in multi-omics, scabies biology, and acaricide studies), (ii) establishing foundational molecular resources, including the first transcriptome, proteome, and de novo assembled nuclear and mitochondrial genomes, recombinant proteins and crystal structures, and functional tools like RNAi. These resources catalysed the field, as they enabled global research on diagnostics, drug resistance, immune evasion, and pathogenesis and (iii) Dissecting molecular interactions between scabies mites and bacteria, influencing treatment guidelines and prompting the formation of an internationally funded ($1.4M) global scabies microbiome consortium. She led development of the key scabies animal model, first recombinant proteins, and major molecular datasets.

Katja's contribution to the filed reflects in many layers, translational, industry, and policy leadership. She led over $400K in industry-funded R&D, including as consultant for Hatchtech Pty Ltd on repurposing Xeglyze™ (FDA-approved for head lice) for scabies. She collaborated with Phytomed (NZ), AnteoTech (Australia), led international contracts with NIAID (USA), as well as initiated partnerships with Boehringer (USA) and Abington Health (UK). As a founding member and scientific advisor of the International Alliance for the Control of Scabies (IACS), she helped shape global research and control policy. She contributions supported WHO's recognition of scabies as an NTD in 2017. In 2025, She was appointed Co-Chair of the WHO Discovery Research Working Group for Skin NTDs. She also contribute to the development of the S2k guideline on scabies through a nominated expert panel led by the German Dermatological Society and dEBM at Charité, Universitätsmedizin Berlin. Her work has directly influenced public health guidelines in Australia, Europe, and the Pacific. Notably, her research with Orange Sky Australia contributed to the revision of Australia's guidelines on rheumatic fever (2022), and has been cited in policy documents and clinical guidelines from Ireland, Spain, and Belgium. Since 2023, she has served as a scientific advisor to the ongoing 'Healthy Living Practice 2' initiative, funded by the Indigenous-led STARFISHresearch program, which aims to expand effective antimicrobial decontamination studies to six major skin pathogens, including scabies.



2026 ASP Fellow, Katja Fischer

Katja's engagement with scabies-endemic, remote First Nations communities is central to her translational, multidisciplinary "bench-to-patient" approach. She works closely with affected communities and local health professionals, where building trusted relationships is essential and time-intensive. Outreach includes on-site communication before, during, and after studies, ensuring mutual understanding, transparency and long-term trust. She also invest in remote QLD education and capacity building. She has secured >$140K in funding for high school outreach to promote 'Health and Sciences' careers among remote/regional Aboriginal and Torres Strait Islander students. For over a decade, her team and herself have promoted science and health careers by delivering hands-on workshops to North QLD schools, followed by one-

ASP Fellowship cont...

week placements at QIMRB. In 2024-25, she expanded this program to include broader institutional participation. Of 20 students who attended since the program's inception, two are now enrolled Medical Science at JCU, with four more planning to pursue Paramedic Science, Pharmacy, Medicine and Veterinary Science. She is working with the QIMR Growth and Partnerships Office to establish a dedicated QIMRB cadetship program for university students from remote areas. Additionally, she developed and led seven one-day modules for the 'Concepts in Parasitology', 2018-25, which offer ECRs exposure to prominent parasitologists and forefront technologies. She co-produced a 30-minute documentary, Live from the Lab – The War on Scabies in collaboration with Australian Society for Parasitology, which has gained over 56K views since its release.

Her leadership at a glance:

Institutional leadership;

Member Safety committee 2010-present, QIMRB Safety Deputy Chair 2014–2018, QIMRB Safety Chair 2018-present, Member QIMRB Executive Safety Committee (2023+)

Member Higher Degrees Committee 2016-present, chairing and reviewing QIMRB based PhD projects

Member of QIMRB Aboriginal and Torres Strait Islander Health Research Steering Committee

Member of QIMRB Reconciliation Action Plan Working Group

She works with BushED Australia Ltd to facilitate QIMRB's contribution in supporting families in remote communities, focusing on school education, mental health, and postnatal family care

Leadership in the field;

'Science & Young minds' – Annual Indigenous Youth engagement in remote north QLD. Organisation and delivery of 3 day laboratory workshop at schools and 1 week work experience at QIMRB.

Consultations with external stakeholders about Indigenous health research, e.g. JCU Townsville, 11/16; ARC forum, 5/16; UQ 02/19; QIMRB 06/2024, Darwin/2025.

Work experience for Brisbane mainstream high school students. Since 2005.

Community engagement work along with research activities. Presentations to councils, schools, patrons. Workshops at health centres. Posters, flyers, radio, newspaper ads.

Advisor for Orange Sky Australia.

Leadership in ASP:

National science engagement through the Australian Society for Parasitology (2020).

Leading scabies research module in Concepts in Parasitology courses 2018, 2019, 2022, 2023, 2024, 2025

Since 2022, She has supported the delivery of Concepts in Parasitology courses by managing chemical storage, procurement, and equipment supply essential for the course to run each year.

In view of his outstanding contributions to science, parasitology and the Society, Katja Fischer would be an extremely worthy recipient of the title, Fellow of the Australian Society for Parasitology.

Proposer: Dr. Deepani Fernando Seconder: Dr. Catherine Gordon

2026 ASP Fellowship awarded to Diane Barton

Congratulations to 2026 Fellow of the Australian Society for Parasitology, Diane Barton, awarded at the 2026 ASP AGM. The citation for Di's Fellowship is published below

Nominators: Professor shokoofeh Shamsi, Em. Professor Lesley Warner

Citation:

We are honoured to nominate Dr Diane (Di) Barton for election as a Fellow of the Australian Society for Parasitology. Over the course of her distinguished career, Dr Barton has made outstanding contributions to parasitology in Australia and internationally, encompassing research, education, mentorship, and professional service. Her work has shaped contemporary understanding of parasite biodiversity, ecology, and their roles in fisheries management and wildlife health.

Dr Barton is internationally recognised for her expertise in helminth systematics, parasite biodiversity, and the applied use of parasites in fisheries science. She has published 108 peer-reviewed manuscripts, nine book chapters, three major final reports (FRDC, NESP), and produced an interactive CD, a formidable body of work that spans taxonomy (including descriptions of new genera and species), checklists, parasite ecology, and population dynamics. Her research has introduced parasites as valuable biological tags in fisheries management, and her influence extends across academia, government, and applied biosecurity.

Her work has been supported by substantial research funding as principal researcher on collaborative projects, most notably through FRDC grants under NT Fisheries. These projects have provided crucial insights into parasite roles in host population ecology, fisheries stock discrimination, and biosecurity risk assessment.

Among her many landmark studies, Dr Barton's research on the cane toad (Rhinella marina) stands as a foundational contribution to Australian parasitology. She conducted the first full documentation of parasites in cane toads in Australia, tracing their origins whether introduced or acquired locally and comparing parasite faunas in native frogs. This groundbreaking work led to the description of three new species, including one new genus and one new subgenus, followed by three further species based on the same collections. Her research was also the first in Australia to explore parasite community ecology in wildlife, assessing the impact of infection on host health and potential for biological control. Her checklist of amphibian parasites in Australia remains a key reference in the field.



Diane Barton receiving her 2026 ASP Fellowship award from ASP President Aaron Jex

In the realm of fish parasitology, Dr Barton has described 27 new species, two new genera, and proposed three new combinations, significantly expanding knowledge of aquatic parasite fauna. Her studies have firmly established the use of parasites as standard tools for fisheries management, applied across ten fish and shark species within the Northern Territory Fisheries portfolio. These contributions have deepened understanding of host ecology, stock structure, and the environmental dynamics influencing aquatic systems.

Her interests also extend to the parasites of reptiles, with a particular focus on pentastomes, where she is currently the only active Australian expert in taxonomy. She serves as the sole Australian member of an international panel investigating the introduced Raillietiella orientalis, a species with devastating impacts on reptile populations across the Americas. Her broader work on reptilian parasite taxonomy complements her comprehensive approach to biodiversity and host–parasite interactions.

A passionate educator, Dr Barton has taught parasitology at James Cook University, the University of Adelaide, Charles Darwin University, Charles Sturt University, and the Australian National University. She has supervised 17 Honours, 3 Masters, and 2 PhD students, many of whom have progressed to successful research careers. Through her teaching, she has integrated parasites into zoology curricula, using innovative field-based approaches for example, running practicals where students examined fish morphology and ecology through the lens of parasitism.

Dr Barton has been an inspiring mentor to emerging and female parasitologists, leading by example and fostering a culture of curiosity and collaboration. She has supported students and colleagues informally, sharing her expertise generously.

Dr Barton has been a continuous member of the ASP since 1989, serving as Queensland State Representative (2001–2002), presenting numerous talks and posters, and contributing to ASP Science Week events such as parasite art workshops and public outreach sessions. Her achievements within the Society include:

- Best Student Paper (ASP 1993)

2026 ASP Fellowship awarded to Brian Cooke

Congratulations to 2026 Fellow of the Australian Society for Parasitology, Brian Cooke, awarded at the 2026 ASP AGM. The citation for Brian's Fellowship is published below



Brian Cooke receiving his 2026 ASP Fellowship award from ASP President Aaron Jex

Geoff McFadden and I would like to nominate Brian Cooke as a Fellow of the Australian Society for Parasitology based on his outstanding scientific contributions, leadership, and his impact to the disciple of parasitology, and to the Australian Society for Parasitology, over a period of about 30 years. Below, we detail the basis for the nomination; and we provide a curriculum vitae as a separate document.

Professor Brian M. Cooke began his career with a Ph.D. from Birmingham University in 1993. He ran a successful laboratory at Monash University for many years and is currently as an Adjunct Professor at the Australian Institute of Tropical Medicine and Health at James Cook University. He has been a Member of the Australian Society for Parasitology since 1995 and served as an Officer of Council through his role as Editor-in-Chief of the International Journal for Parasitology (IJP) since 2015.

As detailed below, Brian has made pioneering research contributions in i) the biomechanics of malaria parasite-infected red blood cells, ii) the function of exported proteins of malaria parasites, and iii) elucidation of molecular mechanisms of parasite-host interactions. More recently, he has made important contributions to studies of Babesia.

Malaria, caused by infection with Plasmodium spp. parasites, is responsible for severe morbidity, mortality and socio-economic hardship in many areas of the world, particularly Africa. During intraerythrocytic development the host red blood cell membrane is modified in ways that enhance cytoadherence vascular endothelium, leading to complications of placental and cerebral malaria. Brian made important technology developments and research findings that have underpinned our understanding of the molecular mechanisms that underlie the severe and often fatal pathophysiological consequences of human malaria infection.

Brian's innovations include technologies for measuring the adhesion of flowing malaria parasite-infected red blood cells and technologies for measuring mechanical properties of malaria parasite-infected red blood cells. These novel technologies allowed Brian and colleagues to understand how parasite proteins modify the red blood cell membrane and how they interact with each other and the host to cause severe disease in humans. His lab generated transgenic malaria parasites and analysed the rheological effects of different red blood cell modifying proteins.

Some of his important publications in this area include: Crabb, Cooke et al (Cell, 1997) in which it was shown that knobs enable malaria-infected red cells to cytoadhere under physiological shear stress; Cooke et al. Blood (1996) and Glenister … Cooke (Blood 2002), in which contributions of parasite proteins to altered mechanical properties of malaria-infected red blood cells were deciphered; Cooke et al (British Journal of Haematology, 2002), in which a competitive flow-based assay was developed and used to assign functional roles to parasite proteins; and Cooke et al. (Journal of Cell Biology) in which a Maurer's cleft protein was shown to be essential for expression of the major malaria virulence antigen on the surface of infected red blood cells.

In recent years, Brian and colleagues have made several key studies of *Babesia bovis*, which cause significant global economic impact in animals. His work has helped elucidate the altered mechanical properties of on *Babesia bovis*-infected red blood cells and facilitated the development of transmission-blocking vaccines against *Babesia bovis* Br. J. Haematology, 2020) (NPJ Vaccines, 2023), including the use of Mycobacterium bovis BCG enhanced immunity (Vaccines 2022).

As indicated in the attached biosketch CV, the significance of Brian's work has been recognised by extensive national and international competitive research funding, three patents, six major book chapters, and more than 90 publications in high impact generalist journals of such as Cell, Nature Med, Nature Reviews Microbiology, EMBO Journal and J. Cell Biol, as well as in the top discipline-specific journals including J Biol Chem, Mol Microbiol, IJP, and Blood. Brian has been invited to speak at more than 20 international conferences including as invited Plenary Lecturer at the World Association for the Advancement of Veterinary Parasitology in New Zealand, FEBS Special Lecturer at the EMBO/ESF/FEBS Conference on Macromolecular Complexes in Microbial Pathogenesis in Spain, ISCH/ISB Conference on Clinical Hemorheology in Istanbul, Turkey and most recently at the ESCH/ISCH/ISB Inaugural Conference in Cracow, Poland.

2026 ASP Fellowship awarded to Terry Spithill

Congratulations to 2026 Fellow of the Australian Society for Parasitology, Terry Spithill, awarded at the 2026 ASP AGM. The citation for Terry's Fellowship is published below



Terry Spithill receiving his 2026 ASP Fellowship award from ASP President Aaron Jex

We are delighted to nominate Professor Terry Spithill for recognition as a Fellow of the Australian Society for Parasitology (FASP). Over an extraordinary career of nearly five decades, Professor Spithill has made profound and lasting contributions to the advancement of parasitology and has rendered conspicuous service to parasitology and to the Society through internationally recognised research, leadership, mentorship and professional service.

Professor Spithill pioneered molecular approaches to understanding host–parasite interactions, immunity and vaccine development, with his most significant body of work focused on fasciolosis. His collaborations, notably in Indonesia through ACIAR, provided critical insights into acquired resistance and the feasibility of tropical liver fluke vaccines. He extended this research at McGill University, where he was awarded a prestigious Tier 1 Canada Research Chair in Immunoparasitology and served as Director of both the Institute of Parasitology and the FQRNT Centre for Host–Parasite Interactions. In these roles he built major multidisciplinary research programs and fostered international collaborations across North America and beyond.

Returning to Australia, he forged highly productive partnerships with industry, securing consecutive ARC Linkage grants with Virbac that revealed the widespread problem of drug resistance in *Fasciola hepatica* and advanced vaccine development strategies. His work was featured in the ARC's Annual Report as a case study of innovation, underscoring its national importance. Over his career, Professor Spithill has attracted more than $14 million in competitive research funding, published over 140 peer-reviewed papers (h-index 57) and delivered more than 200 invited national and international presentations.

His service to the Society has been exemplary. He has held multiple leadership roles, including Victorian Representative, Vice-President and President (2009–2011). As the first two-year President, he initiated the Society's inaugural Strategic Plan, negotiated enhanced publishing agreements with Elsevier and championed the establishment of two new International Journal for Parasitology titles. He also chaired the Program Committee for ICOPA XII in Melbourne (2010), a landmark international congress that showcased Australian parasitology on the world stage.

Equally significant is Professor Spithill's legacy as a mentor. He has supervised and trained more than 40 graduate students, 19 postdoctoral fellows and numerous visiting scientists from across the globe. Many of these individuals have gone on to senior academic, government and industry leadership positions, reflecting the breadth and depth of his influence. Even in retirement, he continues to mentor parasitologists in Australia and the UK.

Professor Spithill's substantial contributions to the advancement of parasitology, his leadership of the Society and his commitment to mentoring the next generation of parasitologists make him a highly deserving candidate for Fellowship of the Australian Society for Parasitology. He is nominated in the strongest terms.

Yours sincerely,

Neil Young

Principal Research Fellow, Melbourne Veterinary School, Faculty of Science, The University of Melbourne

David Piedrafita

Professor

Institute of Innovation, Science, and Sustainability, Federation University

ASP Fellowship Diane Barton cont...

• Invited Plenary Speaker (1989, 2025)

• Editorial Board Member, IJP: Parasites and Wildlife (2025–)

• Frequent reviewer for IJP and IJP:PAW

Her enduring commitment to the Society and her advocacy for integrating parasitology into broader ecological and management contexts exemplify the spirit of the ASP.

Dr Barton's career also illustrates adaptability and resilience. As the spouse of an Australian Defence Force member, she has relocated frequently, transforming what could have been a limitation into an opportunity for multifaceted contributions across academia, government, and applied research. Her current work in marine and aquatic biosecurity applies parasitological principles to government policy, particularly in the management of marine pests and ballast water, bridging research and real-world application.

Through her 108 publications, extensive student mentorship, leadership in taxonomy, and integration of parasitology into environmental and fisheries science, Dr Barton has made profound and lasting contributions to the discipline. Her record exemplifies scientific excellence, mentorship, and service, making her an outstanding candidate for election as a Fellow of the Australian Society for Parasitology.

ASP Fellowship Brian Cooke cont...

Brian has made outstanding contributions to the Society through his long-standing service to the International Journal for Parasitology (IJP). Appointed Deputy Editor in 2011 then Editor-in-Chief in 2016, Brian has since steered the journal's strategic direction, scope and editorial standards, ensuring the publication of high-quality, peer-reviewed research across all domains of basic and applied parasitology.

Under his leadership, IJP has become the highest impact factor-ranked journal dedicated to the full breadth of parasitology, solidifying its status as the premier specialist journal in the field. Brian has upheld a rigorous peer-review process, fostered scientific integrity and set benchmarks for excellence and innovation within our discipline. His editorial philosophy reflects a deep commitment to the global parasitology community and a belief in the transformative potential of research from all corners of the world. Brian's dedication to IJP is also reflected in his commitment to the journal's visual identity. He has championed the creation of artistic journal covers that have become highly sought after by authors, serving as an additional form of recognition for the impact of their studies. These covers have helped broaden the journal's appeal to a diverse audience and reinforce the visibility and accessibility of parasitology research.

Brian has played a pivotal role in strengthening the journal's partnership with Elsevier, which has significantly contributed to the financial sustainability of our Society. Between 2014 and 2023, IJP generated A$2,465,467 in revenue for the Australian Society for Parasitology (ASP), enabling our Society to host annual meetings, support student travel and teaching grants, and fund a wide range of initiatives aligned with ASP's renewed mission.

Beyond financial stewardship, Brian has introduced several impactful initiatives under the IJP banner. He has commissioned and edited numerous highly cited Special Issues, expanded the journal's visibility through social media and outreach activities, and actively engaged with early-career researchers through

publishing workshops and networking events. His efforts have elevated IJP's profile through the establishment of IJP-Elsevier-ASP prizes and awards. Since 2011, IJP has provided some A$62,000 in support for over 22 national and international meetings, sponsoring IJP-named sessions, prizes and awards.

Brian has been a passionate advocate for equity and inclusion in parasitology. He championed the IJP-Elsevier-ASP Disadvantaged Researcher Award, which has enabled researchers from under-resourced regions to attend the Concepts in Parasitology course since 2019. He has also been a strong supporter of Women in Parasitology initiatives, further demonstrating his commitment to fostering a diverse and inclusive scientific community.

In the light of these contributions to parasitology and our Society, we enthusiastically nominate Brian Cooke as a Fellow of the Australian Society for Parasitology.

Yours sincerely,

Leann Tilley FASP

Geoff McFadden FAA FASM FASP

Vale Dame Bridget Margaret Ogilvie AC DBE FRS FAA, 24 March 1938 - 27 April 2026

Dame Bridget Margaret Ogilvie AC DBE FRS FAA was a renowned parasitologist, dedicated to supporting pioneering research in the UK and around the world as well as mentoring early career researchers and championing the public's understanding of science, Dame Bridget Ogilvie died on 27 April 2026.



Dame Bridget Ogilvie, Copyright 2019, University of Wollongong

Dame Bridget Ogilvie was one of Australia's most important parasitologist having led the Wellcome Trust for many years. Her contributions to parasitology and science more broadly were immense.

Bridgets Ogilvie's contributions were widely recognised. She was appointed Dame Commander of the Order of the British Empire in 1996, elected a Fellow of the Royal Society in 2003, appointed a Companion of the Order of Australia in 2007 and elected a Fellow of the Australian Academy of Science in 2008.

Bridget Ogilvie was an Australian and British Scientist, born in NSW and educated in Armidale and completed a Bachelor of Rural Science (Hons I) at the University of New England, graduating with the University Medal in 1960. Bridget was awarded a Commonwealth Scholarship to attend Girton College, Cambridge, where she earned a PhD for her pioneering immunological work on *Nippostrongylus brasiliensis*. Following her PhD, she joined the National Institute of Medical Research (NIMR) in London. At the NIMR, Ogilvie conducted research on parasitic worm infections. Her work helped explain why hosts do not expel these infections effectively, contributing to broader understanding of immune responses and, later, of the increased risk of developing allergies in the modern world. During this time, she formed long-standing friendships with colleagues who shared interests in science, music, art travel and swimming.

Bridget Ogilvie pursued her career at a time when women were underrepresented in science, particularly in senior roles. She encountered institutional barriers but was not daunted by them. Her father, John Ogilvie, strongly supported her education. When advised by a bank manager against spending money on his daughter's education, he replied that it was the best fertiliser he knew.

In 1979, Bridget Ogilvie joined the Wellcome Trust to lead its Tropical Medicine programmes, marking a transition from laboratory science to research leadership. In 1991, she was appointed Director, retiring in 1998. Her tenure coincided with a major transformation. During her time as the Director, Bridget established the Sanger Institute. The Wellcome Trust divested its holdings in the Wellcome pharmaceutical company over that period, creating a substantial independent endowment. Under her leadership, the Trust expanded significantly. By 1998, its endowment had reached approximately £11 billion, laying the foundation for its current position as one of the world's largest biomedical research funders.

Bridget Ogilvie shaped the Trust's modern strategy. She supported outstanding researchers across disciplines while investing in the systems required for their work. She placed particular emphasis on long term science, infrastructure and institutional strength, recognising that sustained discovery depended on more than individual grants.

One of Bridget Ogilvie's most consequential decisions was to support the Sanger Centre, now the Wellcome Sanger Institute, as a central contributor to the Human Genome Project. At a time when genome sequencing risked being dominated by private interests, this ensured that it remained a public endeavour. Under John Sulston, the institute became a global leader in genomics, helping to establish the foundations of modern genetic medicine. It is now housed in a building in Cambridge that bears her name. She also secured agreement from the UK government to match Wellcome funding through the Joint Infrastructure Fund, modernising laboratories and equipment across universities and strengthening the national research base.

Vale Dame Bridget Margaret Ogilvie AC DBE FRS FAA, 24 March 1938 - 27 April 2026

Bridget Ogilvie remained committed to global health challenges, particularly diseases lacking commercial incentives for drug development. In 1999, she became Founding Chair of Medicines for Malaria Venture, supported by the Gates Foundation and others, helping drive the development of new therapies.

After retirement, Bridget played a significant role in public engagement with science and science in education as a trustee of the Science Museum and chair of the AstraZeneca science teaching trust. She was active in science advocacy and governance. She co-founded Sense About Science and served on numerous boards, including Cancer Research UK, AstraZeneca, the Lister Institute and Lloyds TSB.

In 2001, she was elected High Steward of the University of Cambridge, serving until 2009. She would remark, with characteristic dry humour, that the medieval office once included being executed on behalf of the university, as had Thomas More.

Bridget mentored a generation of outstanding parasitologists including Rick Maizels, Murray Selkirk, and Charles McKenzie who carried on her interests to understand how worms infections manipulated the host immune response.

Dame Bridget Ogilvie was awarded a Companion of the Order of Australia in 2007 for services to science policy and parasitology. Although she has achieved so much outside of the parasitology field, Bridget said that she, "remained a parasitologist, though few outside this community now know this, as life has led me in unexpected other directions."

As part of the 2007 Conference for the ARC/NHMRC Research Network for Parasitology and the Australian Society for Parasitology the ASP Network ran a public outreach event which was "The Hypothetical - global warming and parasites". Hosted by Robyn Williams (ABC), during this hypothetical scientists and policy makers debated global warming and the effects on parasites: "Will rising temperatures lead to the spread of deadly and debilitating parasitic diseases in Australia?" The Hypothetical took place at the Great Hall of New Parliament House on 11 July 2007. The ASP was thrilled that Bridget was able to join the panel, which comprised of Dame Bridget Ogilvie, Senator Lyn Allison, Lieutenant Colonel Bob Cooper, Dr Eva Bennet-Jenkins, Prof Bart Currie and Dr Peter Daszak, who all made such a wonderful contribution to this lively public event.



Dame Bridget Ogilvie, 2024, photo taken by Nick Smith.

In 2024 The Australian Society for Parasitology was honoured to name its new education award 'The Bridget Ogilvie Medal' in recognition of Dame Bridget Ogilvie's immense contributions to science and parasitology, and to science education.

The members of The Australian Society for Parasitology play tribute to Dame Bridget as a renowned scientist, a passionate advocate for science communication, global leader in research funding and a wonderful mentor.

Written by Professor Karen Day AM, The University of Melbourne, Professor Margaret Sheil AO, Vice Chancellor of Queensland University of Technology. Professor Nick Smith, and Lisa Jones, ASP. This article was written with the Ogilvie family.

Vale David Leathwick

Sad passing of David Leathwick

The parasitology world lost a major figure with the recent passing of our New Zealand colleague, Dr David Leathwick. Dave was an international opinion leader for worm control in sheep and cattle, and a key contributor to current concepts underpinning anthelmintic resistance management.



David Leathwick

As the lead scientist of parasite research at New Zealand's AgResearch Grasslands campus in Palmerston North, Dave and his team were in the thick of the global debate around the development and management of drench resistance for over 30 years. His approach was hard to beat: farm surveys and field experience to define the issues, concept development through Dave's computer simulation modelling, with strategy testing and validation in uniquely large-scale field trials, the envy of other research groups – who else ran multi-year trials with four treatments, four replicates and 2000 sheep? From the 1990s onward, Dave and his group had an influential role in developing the resistance management concepts now accepted universally as the basis for recommendations to farmers, including the use of combination anthelmintics, the application of refugia strategies for non-resistant parasites, timing of treatments in relation to parasite epidemiology, and the sustainable management of long-acting anthelmintics.

A big part of Dave's ethos was the impact on the ground – making sure the information made a difference. He was a prolific contributor to the scientific literature (the group must have massively increased the New Zealand Veterinary Journal's citation index), a regular on the parasitology conference circuit and a member of many international workshops. But the close connection with the grazing industries – sheep and cattle – was a fixture for Dave, and he was always in demand as a speaker at veterinary meetings and farmer gatherings.

Dave's famously forceful personality was very evident at technical meetings, but his absolute commitment to scientific integrity was never in doubt: as one colleague put it, his mantra was "You can say anything you like, as long as you're right". But Dave was adamant that "science is a team effort" (his words), and his Palmerston North team was tight knit and supremely loyal, as well as multi-disciplined. Dave's friendships and collaborations around New Zealand and in many other countries expanded their influence and led to an impressive portfolio of co-publications. Various scientific awards and recognition by the livestock industries attest to Dave's contributions.

The complete scientist, Dave maintained a long-standing interest in entomology – his doctorate was on an obscure insect – and he continued his research into "hive wasps" as a sideline to his day job, as well as modelling anthelmintic resistance in worms of equines and other species. Outside parasitology, Dave was a keen martial arts participant, hunter (normally with a camera) and fly fisher – his travels around the world were opportunities to cast a line in unfamiliar waters – and his small property and flock of goats kept him anchored in rural reality.

Dave Leathwick was a very visible presence on the global parasitology scene, and his passing leaves a big gap in knowledge and scientific ability. The world of livestock parasitology is now much the poorer.

Obituary written by Brown Besier

March 2026

Vale Professor Robert Sinden

In memoriam: Remembering Professor Robert Sinden, a giant of parasitology research whose work transformed our understanding of malaria transmission.

Professor Robert (Bob) Sinden was based, for most of his career, at Imperial College London, where he became internationally recognised for pioneering studies of the cellular and molecular biology of *Plasmodium*, particularly the parasite's sexual stages and its development within the mosquito.

With malaria research often focused largely on the disease-causing blood stages in humans, Bob was one of the first to insist that transmission through the mosquito deserved equal attention. His research revealed the remarkable complexity of gametocyte formation, gamete emergence, fertilisation and parasite development in the mosquito midgut, not to mention it's vulnerable bottleneck during transmission – an enticing Achille's heel for interventions.

Bob's career was influenced greatly by his time as a PhD student in Edinburgh under the guidance of Geoffrey Beale, with Bob initially focussed on electron microscopy of Paramecium. Beale's encouragement to use microscopy and the founding of malaria transmission in Edinburgh (by two of Bob's contemporaries, Richard Carter and David Walliker) set in motion Bob's transformation from cell biologist to parasitologist. Linking up later with PCC Garnham and the discovery of the liver stages and hypnozoite form (which Bob was intimately involved with) established in Bob a passion for the biology of transmission, and the rewards of a life spent peering down the microscope.

Indeed, a legacy of his work will undoubtedly be his microscopy, with Bob a pioneer during the heady days' of 1980s electron microscopy (alongside other giants like Bannister and Aikawa). Bringing in conventional cell biology and molecular studies alongside technological innovation and basically "brave science", Bob helped establish transmission biology as a central discipline in malaria research. It wasn't easy, with dominant currents pushing liver and blood stages. Bob would often start talks with a graph from early last century (Thompson 1911) showing that whilst blood stage parasites would clear, crescent forms (the sexual stage gametocytes) would linger long after treatment and therefore seed transmission. This was all part of his relentless lobbying to shift the field from solely focussing on human infection to include the parasite's passage through the mosquito.

Bob's scientific influence also extended well beyond his lab research. He developed foundational cellular assays that enabled others to investigate—and pharmaceutical organisations to screen for—compounds capable of blocking transmission. These approaches remain part of contemporary antimalarial drug-development programmes, including the screening cascades used by Medicines for Malaria Venture. Those who worked with Bob also remember qualities that can't be captured by a publication list. He was generous with his ideas, enthusiastic (almost effervescent sometimes!) in discussion and remarkably willing to support younger scientists. His mentorship influenced many leading researchers in malaria and parasitology today.

Bob was also a quiet thinker. He would remove himself in thought and was happiest at 10,000 feet in a glider silently soaring on thermal currents, what he would call blue skies research. The parasitology community has lost an exceptional scientist, mentor and thinker, but it remains enriched by the questions he asked, the people he inspired and the enduring scientific legacy he leaves behind.

Written by ASP Executive Secretary, Professor Jake Baum, University of New South Wales.



Top-bottom: Robert (Bob) Sinden; Sinden Gliding; Protistologica 1975; Team Hypnozoite Bray, Garnham Cogswell, Krotoski and Sinden.

Vale Professor Nicholas John White (1951 – 2026)

In Memorium:

Professor Nicholas John White (1951 – 2026)

Nuffield Department of Medicine, Oxford University

and

Mahidol Oxford Tropical Medicine Research Unit (MORU), Mahidol University, Bangkok

During the ASP Annual Conference at the Gold Coast in June, 2026, we paid tribute as a Society to the life of Professor Nick White, who passed away from cancer in February, at the age of 74. A true giant of tropical medicine, Nick's life-long contributions to the constant improvement of malaria treatment, including spear-heading the introduction of the artemisinin family of drugs, has had an enormous impact on our field, directly contributing to the saving of perhaps hundreds of thousands of lives. He has also been widely regarded as one of the world's foremost clinical experts on *vivax* malaria. In fact, quickly scanning the programme from our meeting, I easily identified more than 20 malaria presentations that directly or indirectly drew from Prof White's research.

However Nick's research work went beyond malaria, and he was a recognised authority on melioidosis, dengue fever, TB, typhoid fever, scrub typhus, leptospirosis and other infectious diseases of the earth's tropical regions. In carrying out this work, White also focussed on constant improvements to methodology and introduction of new technologies as they became available, innovation being a defining characteristic of the work of his teams. An important example is his very early championing of pharmokinetic and population-level pharmacodynamic studies of antiparasitic drugs, so as to ensure the best possible regimens and combinations were deployed. His keen awareness of the constant threat of developing drug resistance in malaria parasites and other pathogens directly informed this approach.

Nick White was born in London but spent his childhood in Singapore, developing a love of tropical forests that lasted all his 74 years and was reflected in his choice of Thailand as home base for the majority of his professional life. Prof White loved playing the blues, and was an accomplished harmonica and guitar player, never missing any jam sessions on offer in Bangkok or at international meetings. His loss is keenly felt across the globe. Nick White is owed a profound debt of gratitude by the entire field for his leadership in driving the best possible drug treatments for those suffering from infectious diseases.

Written by Professor Colin Sutherland (LSH)

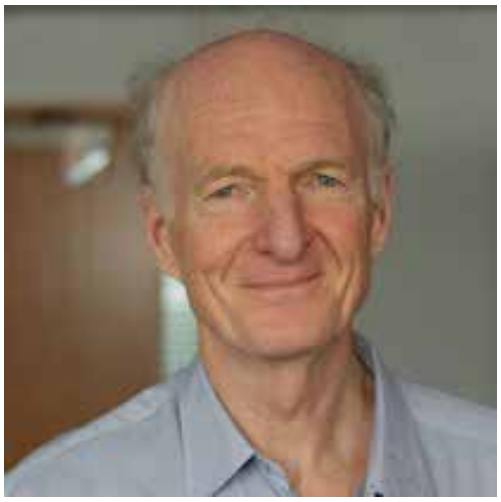


Photo credits: top https://www.tropmed.ac/team/nicholas-white bottom Photo credit: https://www.youtube.com/watch?v=LUdv-udVf7g



Meet the ASP President-Elect

Katja Fischer was elected into the position of ASP President-Elect, 2026 at the 2026 ASP AGM on Wednesday 1st July 2026. She was nominated by Aaron Jex and Danny Wilson.



Katja Fischer

Professor Katja Fischer is Senior Group Leader of the Scabies Laboratory at QIMR Berghofer Medical Research Institute in Brisbane, Australia. Following training in Parasitology at the University of Freiburg and a PhD in the Molecular Biology of Malaria Parasites from the University of Würzburg, Germany, she joined QIMR Berghofer as a postdoctoral researcher. Since becoming Laboratory Head in 2007 and Group Leader in 2013, she has led a world-leading research program focused on scabies. Her pioneering work has transformed understanding of this neglected tropical disease and driven the development of innovative diagnostic and control strategies to reduce the burden of scabies and its severe secondary bacterial infections worldwide.

Katja is committed to advancing parasitology through collaborative research, capacity building, and regional and global impact. Her engagement with parasitology and ASP began during her PhD and early postdoctoral work in malaria genomics. As part of the malaria genome consortium, Katja contributed to chromosome mapping and gene discovery underpinning the *Plasmodium falciparum* genome assembly and identified subtelomeric gene families involved in antigenic variation. This early work established her long-term commitment to parasitology and continues to inform her research approach. Katja now leads internationally connected programs focused on scabies and associated bacterial diseases, spanning discovery through to implementation in remote and resource-limited settings. This work sits at the intersection of tropical health, Indigenous health, and global equity, and relies on strong cross-disciplinary and cross-institutional collaboration – Something that Katja says closely aligns with ASP's mission. A central focus of Katja's work is education and outreach. Since 2014, she has secured ~$180,000 to deliver hands-on parasitology programs in remote Far North Queensland schools, and to support annual, fully funded work experience placements at QIMR Berghofer in partnership with the QUT Oodgeroo Unit and ASP. These initiatives are creating clear pathways into higher education and are expanding across disciplines, with continued support including funding for 2026. Katja has a strong track record in securing competitive funding and fostering collaborative research, and is committed to supporting early- and mid-career researchers. Katja also contributes to global health advocacy, including work that supported recognition of scabies as a Neglected Tropical Disease, and advisory roles with WHO.

Katja's engagement with ASP spans more than two decades. She has been a member since 1999 and was honoured to receive the Bancroft-Mackerras Medal (ASP, 2020) and the Bancroft Medal for Indigenous Health Impact (QIMR Berghofer, 2023), the Bridget Ogilvie Medal (ASP, 2026) and ASP Felowship, 2026. Since 2018, Katja has contributed annually to training in Concepts in Parasitology modules for early-career researchers.

Katja is deeply honoured to be elected into the role of ASP President-Elect – an opportunity I regard as both a privilege and a responsibility. Katja says "throughout my career, I have benefited greatly from the Society's support, networks, and community, and I am keen to give back in a meaningful way. As President-Elect, I will focus on strengthening ASP's visibility, supporting the next generation of parasitologists, and fostering collaboration across disciplines and regions. I am committed to contributing to a connected, inclusive, and impactful ASP community."

Meet the ASP State Representative from NT

Deborah Holt, CDU, has been voted into the position of Northern Territory Representative, 2026 on 1 July 2026 . She was nominated by ASP members Kamil Braima and Thien Phuc Tran.

Deborah Holt is a molecular biologist with a research focus on bacterial and parasitic pathogens of significance in tropical regions of the world, including remote Australian Indigenous communities. She has a particular interest in pathogen genome sequence data analysis and its application in the development of rapid molecular surveillance and identification tools.



(above) Deb Holt, CDU, ASP Northern Territory Representative

The Australian Society for Parasitology Inc.



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Use the QR code to check

https://asp.wildapricot.org/

Meet the ASP Fellows Representative

Denise Doolan, University of Queensland, has been voted into the position of ASP Fellows Representative, 2026 on 1 July 2026. She was nominated by ASP members Robin Gasser and Deepani Fernando.



Denise Doolan, ASP Fellows Representative

I am an NHMRC Leadership Fellow (L3) and Group Leader at the Institute for Molecular Bioscience at The University of Queensland. I am a molecular immunologist with a long-standing research focus on malaria. My malaria research has two major and closely integrated focuses: the discovery and development of next-generation malaria vaccines, particularly T-cell vaccines targeting pre-erythrocytic stages; and understanding the molecular and cellular basis of immunity to malaria, including the factors that drive inter-individual heterogeneity in responses to infection and vaccination. Our work combines human immunology, systems approaches and genome-wide antigen discovery to identify protective immune mechanisms and vaccine targets.

ASP has been an important part of my scientific community for many years. I previously served as ASP President from 2011–2013, and was elected a Fellow of the Society in 2019. I was honoured to be named as the Fellows Representative on ASP Council in 2026.

The ASP Fellows collectively represent an extraordinary breadth and depth of experience across parasitology, research leadership, education and service. As Fellows Representative, I hope to provide a strong connection between the Fellows and Council, to ensure that their perspectives and experience continue to contribute to the Society, and to help recognise and share the achievements of Fellows with the broader ASP membership.

I would be very happy to hear from Fellows with news, ideas or issues they would like brought to Council.

I look forward to working with the Fellows and the broader ASP membership, and to helping maintain the strong collegiality that has always been one of the Society's great strengths.



Meet the ASP State Representative from South Australia

Di Barton has been elected into the position of South Australian State Representative, 1 July 2025. She was nominated by ASP members Ian Beveridge and Shokoofeh Shamsi.



ASP SA State Representative, Di Barton

Dr Di Barton is a wildlife parasitologist, with a passion for educating people about parasites and their importance in general biology and ecology. Di is an internationally recognised parasite taxonomist and ecologist, working across all host groups and parasite types.

Di completed her undergraduate B. Science degree at the University of Queensland, majoring in zoology and parasitology – at the time, the Department of Parasitology still existed and complete subjects were devoted to singular topics like helminths, protozoa, immunology and physiology – things we now cover in single lectures in parasitology subjects. She then completed her Honours project with Prof. Bob Lester and the late Dr Ian Whittington in fish parasitology before working for Ian as a research assistant on the monogenean parasites of elasmobranchs. Di then moved to James Cook University in Townsville to undertake her PhD on the parasites of the introduced cane toad, under the supervision of Prof. David Blair. As well as describing the parasites of the toad, she undertook studies on the ecology of the parasite community of the toad, at the time a relatively new field.

Following her PhD, Di became a lecturer in the Department of Zoology at JCU, introducing parasites to as many students as she could, from her 1st year Introductory Zoology through to the 3rd year Marine Parasitology courses. She was passionate about bringing parasitology into the general biology and ecology courses, emphasising the importance of parasites in host biology and ecology.

Following her time at JCU, Di moved to Adelaide and worked at PIRSA on a sheep nematode project before moving into an administration role at the University of Adelaide as an Academic Program Officer for the School of Animal and Veterinary Sciences. During this time, however, she managed to keep working on parasites, finishing up projects from JCU.

In 2013 Di moved to Darwin and began working for the Northern Territory Fisheries Research Division, allowing her to return to parasitology full-time. The work focused on the use of parasites as biological tags across numerous fish and shark species for fisheries stock management.

In 2017 Di moved to Wagga Wagga and began her collaboration with Prof Shokoofeh Shamsi and Prof David Jenkins at Charles Sturt University. In the parasitology lab at CSU, they have supervised numerous students involved in projects across diverse host groups, such as yabbies, freshwater and marine fish, wedge-tailed eagles, Tasmanian devils, feral deer and wild dogs, culminating in 55 papers, 14 Honours projects, 1 Master's project and 2 PhD projects.

In 2023 Di began working for the Department of Agriculture, Fisheries and Forestry, based in Adelaide, in the area of marine biosecurity and policy development for ballast water management. Again, parasites became her hobby but she has continued to work on projects with Shokoofeh and Dave as well as with NT Fisheries and international collaborators.

Over her career, Di has worked with parasites from across the spectrum, from protozoa to helminths to pentastomes to parasitic mites. She has made significant contributions to the knowledge of the introduced pentastome Linguatula serrata in Australia and has described 33 new species and 4 new genera of parasites. She has published 113 papers so far as well as contributing to chapters for the Keys to the Trematode series, and the ASP publications of the History of Parasitology in Australia & PNG and Australasian Animal Parasites Inside and Out.

Congratulations to ASP Undergraduate prize winners

Congratulations to Ronen Sturrock from Murdoch University, who won the ASP Undergraduate Unit prize 2025.

Congratulations to the recipients of the 2025 Australian Society for Parasitology Prize from James Cook University Abbie Young and and Edward Royle.

Congratulations to the Charles Sturt University students Ella O'Connor who won the 2025 Australian Society for Parasitology Prize ASC305 and Emma Egan who won the 2025 Australian Society for Parasitology Prize VSC323

Congratulations to Lok Man So, University of Adelaide who won the Australian Society for Parasitology Prize 2025, University of Adelaide pictured receiving the certificate from A/Prof Ryan O'Handley.



Undergraduate prize winners receiving their awards and during fieldwork clockwise from top left Lok Man So, University of Adelaide with Ryan O'Handley; Emma Egan, Charles Sturt University with Shokoofeh Shamsi; Abbie Young, JCU and and Edward Royle, JCU and Ronen Sturrock, Murdoch University with Breanna Knight.

Congratulations to Rina Fu, finalist for the 2026 Eureka Prize - STEM inclusion category

Congratulations to ASP Member and 2025 Bridget Ogilvie Medalist Rina Fu for being a finalist at the 2026 Australian Museum Eureka Prize - STEM inclusion category . What began as a passion for making science accessible through a science picture storybook, has grown into a community-driven initiative, Engaging Children/Community In Science (ECIS), reaching >15,500 people of all ages and all abilities through 284 in-person workshops & events (so far!). Watch Rina's entry https://youtu.be/0iA4mRWg_Bw?si=xXo82D4zv8OAg_UX



Finalist for the 2026 Australian Museum Eureka Prize - Stem inclusion category Rina Fu

Congratulations to our ASP Student Prize winners at ASP 2026








2026 ASP Student Prize winners at the 2026 ASP Annual Conference Dinner, at SeaWorld, Surfers Paradise. Prize winners pictured with Conference Co-chair Danielle Stanisic clockwise from top left: Brenna Daily, Connor McHugh, Haowen Deng, Chau Quang, Rebecca Farnell and Chris Taylor.

Congratulations to our 2026 ASP Conference Prize Winners!

- **Brenna Daily**, The University of Queensland for best 15min presentation by a student at the 2026 ASP Annual Conference for her presentation "Systems Immunology and Multi-omics approaches to understanding host immune heterogeneity in *Plasmodium* infection"
- **Connor McHugh**, James Cook University for best 10min presentation by a student at the 2026 ASP Annual Conference for his presentation "*Necator americanus* recombinant protease inhibitors as novel therapeutics for inflammatory disease"
- **Haowen Deng**, University of Melbourne, best 5min presentation by a student at the 2026 ASP Annual Conference for his presentation "Investigating the role of Kelch13 in *Plasmodium falciparum* gametocytes"
- **Chau Quang**, Walter and Eliza Hall Institute of Medical Research, runner-up best 15min presentation by a student at the 2026 ASP Annual Conference for her presentation "Functional antibodies to *Plasmodium vivax* merozoite antigens are associated with protection against clinical malaria"
- **Rebecca Farnell,** Federation University for runner-up best 10min presentation by a student at the 2026 ASP Annual Conference for his presentation "Comparison of larval culture to nemabiome deep-amplicon sequencing"
- **Chris Taylor,** Monash University, runner-up best 5min presentation by a student at the 2026 ASP Annual Conference for his presentation "Mechanistic insights into repurposed compounds as potential antimalarials"

2026 ASP Annual Conference Sponsors

We would like to acknowledge the generous support of our 2026 ASP Annual Conference sponsors, thanks to Elsevier and the International Journal for Parasitology (IJP), IJP DDR and IJP PAW, Elanco, QIMR Berghofer Medical Research Institute, Centre for Tropical Health & Emerging Diseases, Institute for Biomedicine and Glycomics, Griffith University, Southern Cross Diagnostics, New England Biolabs and VectorBuilder.

ASP ANNUAL CONFERENCE GOLD COAST 2026

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Our 2026 ASP Conference sponsors above and below some of our 2026 ASP Conference volunteer team members in front of the conference banner, Rebecca Farnell, Connor McHugh, Tanya King, Hannah Smith, Rohith Kutty, Grace Reeves and Brenna Daily.



2026 ASP Annual Conference

The 2026 ASP Annual Conference took place at Mantra on View Hotel, 22 View Avenue, Surfers Paradise, Gold Coast, QLD 4217 from June 29 – July 2, 2026 opening with the Welcome Reception at Mantra on View Hotel, on Monday June 29, from 6:00 – 8:00pm. The scientific program ran across three full days from 9:00am, Tuesday June 30. The 2026 ASP AGM took place on Wednesday July 1, 2026 and the Conference concluded with dinner at Sea World, Gold Coast, Pre- Dinner at the wonderful Dolphin Beach followed by dinner in the plaza with a DJ on the evening of Thursday July 2, 2026 from 6:30 – 10:00pm.



A total of 253 delegates attended the 2026 ASP Annual Conference and Workshops in Strongyloides and Oral Parasite. There were 113 ASP Students, 73 Regular ASP members, 4 ASP member retirees, 8 Invited speakers, 4 LMIC, 5 sponsors, 5 online, and 41 non members. 219 delegates attended the 2026 ASP Conference, 30 delegates attended the Oral Parasite Workshop Delegates and 22 delegates attended the Strongyloides Workshop.

The scientific program covered all parasitology themes from Veterinary Parasitology to Human Parasitology, with Malaria, Strongyloides, Bioinformatics, Microscopy, Livestock, Wildlife Parasitology, Fish Parasitology, Companion Animals and One Health. The program covered all aspects of parasitology research and that includes basic research in all areas of life science. Prior to the 2026 ASP Conference, on Monday 29, 2026, two one-day workshops took place: Strongyloides Australia ran a one-day workshop and there was an Oral Parasite Workshop. Oral Parasite Workshop combined parasitology, dentistry, microbiology, and One Health frameworks, an area currently underrepresented in both dental education and infectious disease discourse in Australia. It combines live diagnostics, clinical protocols, and translational research, offering immediate applicability for clinicians, researchers, and public health professionals.

Download a conference program

We would like to acknowledge the generous support of our 2026 ASP Annual Conference sponsors, thanks to Elsevier and the International Journal for Parasitology (IJP), IJP DDR and IJP PAW, Elanco, QIMR Berghofer Medical Research Institute, Centre for Tropical Health & Emerging Diseases, Institute for Biomedicine and Glycomics, Griffith University, Southern Cross Diagnostics, New England Biolabs and VectorBuilder.

Invited Speakers

- Dr. Christopher Dean Goodman, The University of Melbourne, Elsevier Plenary Lecturer, International Journal for Parasitology (IJP)
- Dr. Kristina Lehnert, University of Veterinary Medicine Hannover, Germany, Elsevier Plenary Lecturer, International Journal for Parasitology: Parasites and Wildlife (IJP:PAW)
- Professor Jonathan Marchant, Medical College of Wisconsin, U.S.A. Elsevier Plenary Lecturer, International Journal for Parasitology: Drugs and Drug Resistance (IJP:DDR)
- Professor Darren Gray, QIMR Berghofer, 2026 Bancroft-Mackerras Medal Oration
- Dr Emily Francis, The University of Sydney, 2026 Sprent Prize Oration
- Professor Katja Fischer, QIMR Berghofer, 2026 Bridget Ogilvie Medal Oration
- Professor Katherine Andrews, Institute for Biomedicine and Glycomics, Griffith University, Nick White Tribute Invited Lecturer
- Professor Colin Sutherland, London School of Hygiene & Tropical Medicine, Nick White Tribute Invited Lecturer
- Dr. Liisa Ahlstrom, Elanco Animal Health, Invited Lecturer for the Canines Symposium sponsored by Elanco
- Dr Catherine Gordon, QIMR Berghofer Medical Research Institute Invited Lecturer for the Tropical Health Symposium sponsored by QIMR Berghofer, Centre for Tropical Health & Emerging Diseases
- A/Prof Danielle Stanisic, Institute for Biomedicine and Glycomics, Griffith University Invited Lecturer for the Vaccines Symposium sponsored by Institute for Biomedicine and Glycomics, Griffith University
- Dr Swaid Abdullah, University of Queensland Invited Lecturer for the Horses & Cows Symposium
- Dr Deepani Fernando, QIMR Berghofer Invited Lecturer for the Symposium Ticks, Mites, kissing bugs
- Dr Jacinta Macdonald, Institute for Biomedicine and Glycomics, Griffith University Invited Lecturer for the Drugs & Drug Resistance Symposium sponsored by Institute for Biomedicine and Glycomics, Griffith University
- Professor Karen Day, University of Melbourne delivered a tribute to Dame Bridget Ogilvie AC.
- Professor Jake Baum, UNSW delivered a tribute to Bob Sinden.

The first full day of the 2026 ASP Annual

2026 ASP Annual Conference

Conference started with a breakfast event specifically for our research students and early career researchers. The theme for this Student & ECR workshop was "Choose your own adventure - career planning for parasitologists" with an interactive panel discussion about career paths and the choices and decisions we make that affect our careers. The panel comprises the following wonderful scientists who represented a range of career stages and experiences; Dr Catherine Gordon (QIMR Berghofer), Dr Liisa Ahlstrom (Elanco), Christopher Dean Goodman (The University of Melbourne), Dr. habil. Kristina Lehnert (University of Veterinary Medicine Hannover), Professor Jonathan Marchant (Medical College of Wisconsin) and Dr Storm Martin (Murdoch University). Panellists spoke about decisions they made during their career that altered their trajectory. Attendees were given scenarios at the intersection of life and career with different options; they discussed risk vs reward, backup plans, how to make difficult decisions and using support networks. Panellists gave insights into what their decisions ultimately lead to and reflections about those decisions, and, would they have made the same decisions today?

2026 ASP Student Conference Travel Grant

98 ASP students received the 2026 ASP Student Conference Funding with travel funding reimbursing 40% of estimated costs to attend ASP2026. The total funding allocated was $49853 (incl GST).

Southern Cross Diagnostics Travel Award

The Southern Cross Diagnostics Travel Award (SCD Travel Award) was awarded to an early or mid-career, post-doctoral researcher, to promote equity, diversity and inclusion in scientific research and to recognise talent in emerging, under-supported environments. This award, sponsored by Southern Cross Diagnostics was awarded to Hira Muqaddas who is from The University of Sydney and The Women University Multan, Pakistan.

Parents or carers with children were able to watch and listen to the conference presentations live online during the conference in a room separate from the lecture theatres. A multi-faith prayer room was available during the conference. If delegates were not able to attend in-person due to illness or another reason they were able to watch the sessions live-streamed.

The 2026 ASP Annual Conference embraces the values of inclusiveness, social justice, environmental sustainability, scientific advancement, and education within the broader life science community www.parasite.org.au/aspconference/advice/ It is our goal to make our conferences a great experience for everyone, all participants are expected to show respect and courtesy to others across all platforms during the Conference. See our policy page for information on Gender Equality, read our Code of Conduct and find out how to lodge any grievance on the Conference website www.parasite.org.au/aspconference/advice/policy/ and Environmental impact www.parasite.org.au/aspconference/uncategorized/environmental-impact/ advice.

Check out our gorgeous logo! Bernard Lee Singleton designed the 2026 ASP Conference logo with scientific and cultural direction from Grace Reeves which features a tick lifecycle and cultural and ecological aspects of the Gold Coast to show the connection to the local environment, the land of the Yugambeh Language Speaking (YLS) Peoples. The YLS Peoples consist of the clans of the Mununjali; Wangerriburra; Kombumerri, Migunberri; Birrinburra; and Minjungbal.

Attendees were advised to be fully up-to-date with their flu/COVID-19 vaccination and other relevant vaccinations prior to arrival. We had hand sanitizer at the registration desk and masks.

Committee and Volunteers

The 2026 ASP Conference co-chairs were Danielle Stanisic, Griffith University and Swaid Abdullah, The University of Queensland.

Conference Scientific Committee:

The Conference Committee were Darren Gray, QIMR Berghofer; Deepani Fernando, QIMR Berghofer; Ala Tabor, The University of Queensland; Jacinta Macdonald, Griffith University and Nick Smith, ASP.

Conference Coordinator: Lisa Jones

The amazing student volunteers were:

- Grace Reeves, The University of Queensland – Student Volunteer and Aboriginal cultural activities coordinator
- Madeleine Rogers, Griffith University – Accessibility Coordinator
- Rebecca Farnell, Federation University Australia
- Tanya King, Federation University Australia
- Brenna Daily, The University of Queensland
- Connor McHugh, James Cook University
- Simone Sleep, AICIM
- Hannah Smith, Griffith University
- Rohith Kutty, Griffith University
- Ines Marcal Antunes, Griffith University
- Emmanuel Tabilin, QIMR Berghofer
- John Ategeka, Griffith University
- Zhetao Zhang, The Queensland Alliance for Agriculture and Food Innovation (QAAFI)
- Chika Zumuk, QIMR Berghofer
- Sandani Athukoralage, The University of Queensland
- Md Anowarul Haque, The University of Queensland
- Callum Lowe, QIMR Berghofer
- Tu Nguyen, The University of Queensland
- Sara Taylor, QIMR Berghofer
- Jessica Scott, James Cook University
- Skye Robertson, The University of Queensland

Conference Social Media: Beatrice Harris, The University of Sydney, posts used #2026ASP

Student Social Evening Event: This event was organised by Grace Reeves, Rebecca Farnell and Tanya King.

2026 ASP Annual Conference photos



2026 ASP Annual Conference photos



Previous page and this page : 2026 ASP Delegates at the Welcome Reception

Strongyloides Australia held their workshop on Monday 29th Jubne 2026, Wendy Page shown here (left) was in attendance.

2026 ASP Annual Conference photos

2026 ASP Conference started with a breakfast workshop for Students and Early Career Researchers











2026 ASP Annual Conference scientific sessions ran from Tuesday 30th June - Thursday 2nd July











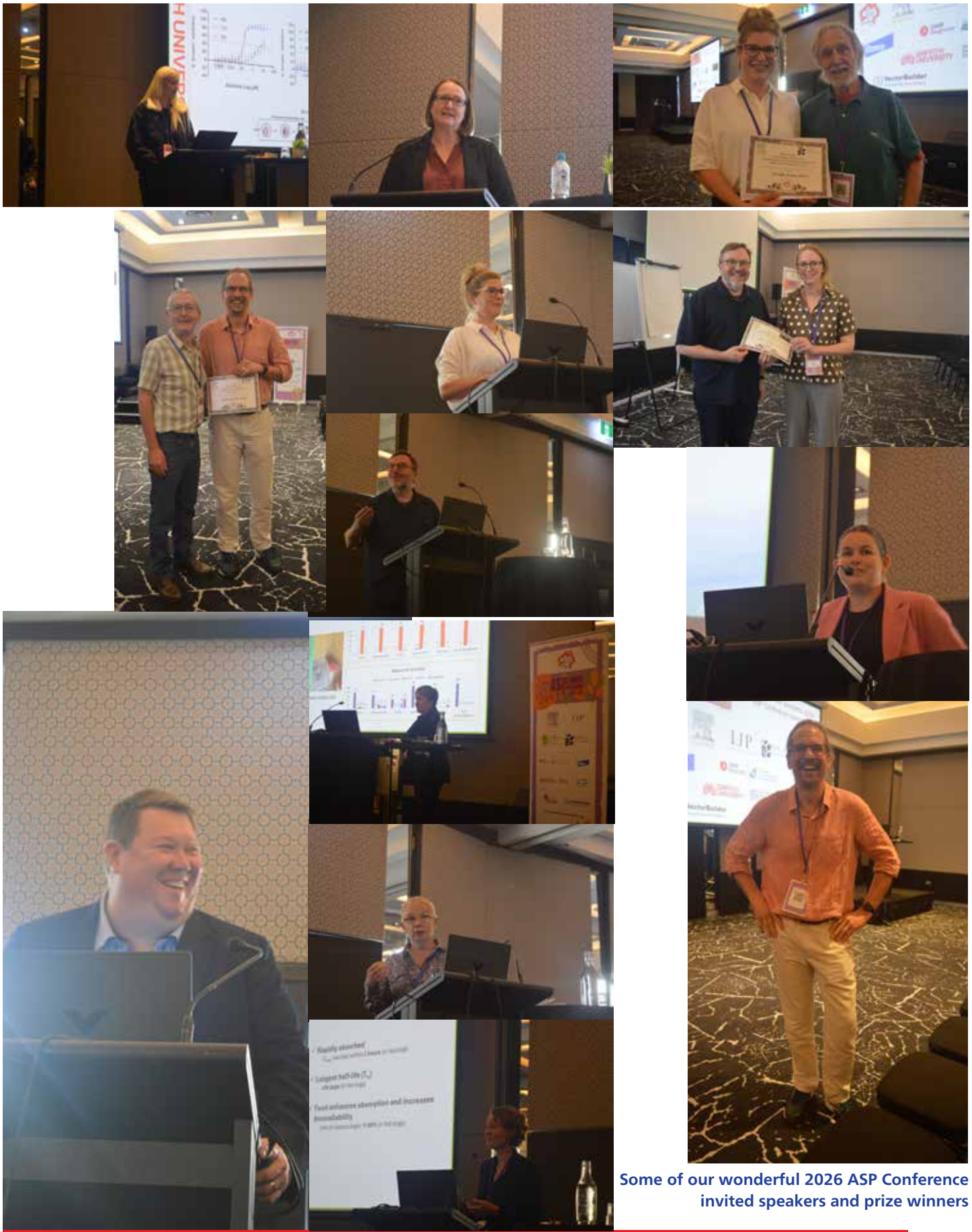








2026 ASP Annual Conference photos



Some of our wonderful 2026 ASP Conference invited speakers and prize winners

2026 ASP Annual Conference photos





"Dance like your favourite parasite" Interactive presentation of "20 years of ASP outreach"























Three days packed with great scientific presentations at the 2026 ASP Annual Conference

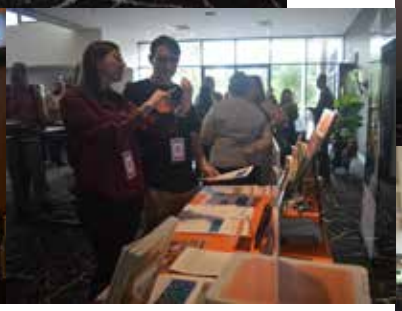
2026 ASP Annual Conference photos

2026 ASP conference sponsors













2026 ASP conference co-chairs and invited speakers above left, Danielle Stanisic (Griffith) and right, Swaid Abdullah (UQ).





2026 ASP Annual Conference photos





Hira Muqaddas, The University of Sydney and The Women University Multan, Pakistan receiving The Southern Cross Diagnostics Travel Award from Amanda Wernicke, SCD and presenting her paper.











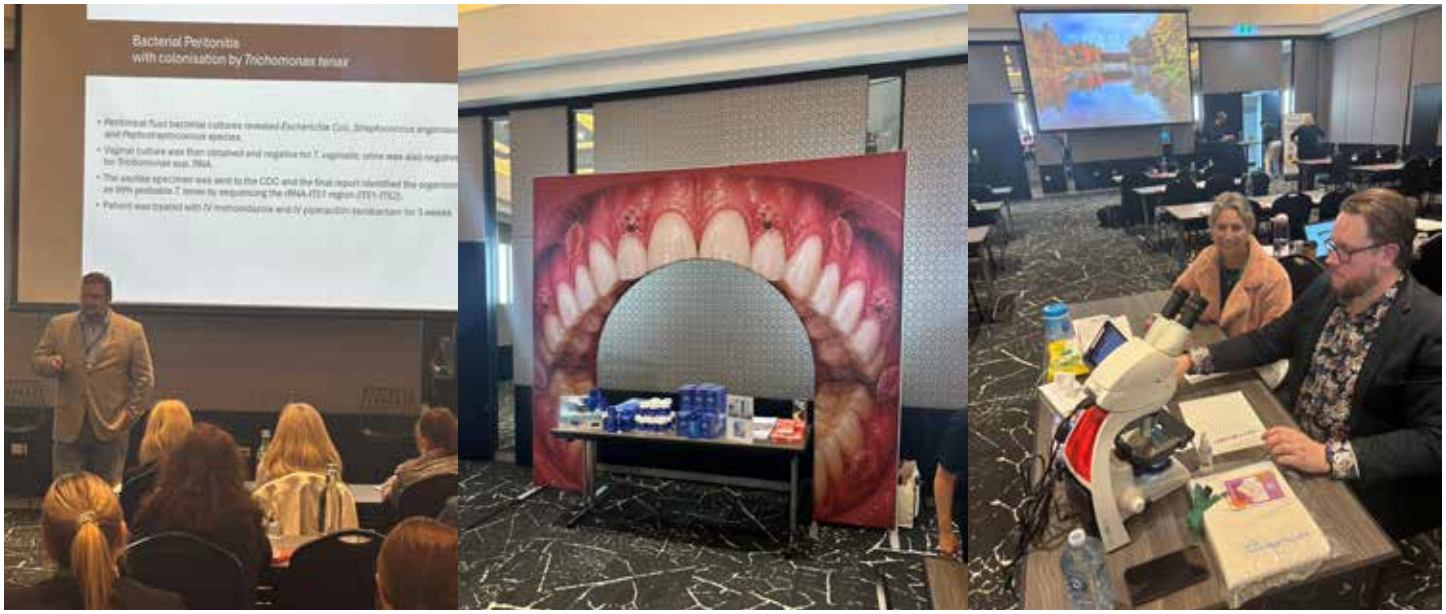






2026 ASP Annual Conference photos

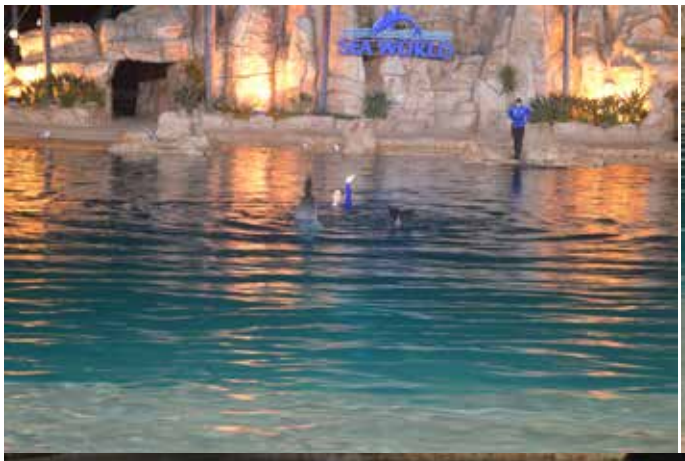
ASP member Dr Simone Sleep organised and co-chaired the Oral Parasites Workshop at the 2026 ASP Annual Conference. This workshop uniquely integrated parasitology, dentistry, microbiology, and One Health frameworks, an area currently underrepresented in both dental education and infectious disease discourse in Australia. It combined live diagnostics, clinical protocols, and translational research, offering immediate applicability for clinicians, researchers, and public health professionals.



Images from Oral Parasites Workshop courtesy Simone Sleep



2026 ASP Annual Conference photos







2026 ASP Conference dinner at Sea World was magical with the Enchanting Dolphin experience.

Please read about animal welfare at Sea World Gold Coast, which is an accredited and independently assessed facility https://seaworld.com.au/animals/animal-welfare

2026 ASP Conference dinner at Sea World





2026 ASP Annual Conference photos












2026 ASP Conference dinner at Sea World

2026 ASP Annual Conference photos













2026 ASP Conference dinner at Sea World

2026 ASP Annual Conference photos

















2026 ASP Conference dinner at Sea World

2026 ASP Annual Conference photos





















2026 ASP Conference dinner at Sea World

Science and Young Minds 2026 QLD State Outreach,QIMR Berghofer



In June 2026 QIMR Berghofer staff delivered "Remote school education in health and medical research".

Science and Young Minds 2026 brought a practical health and medical research program to Normanton State School 15-18 June2026 and created a pathway for selected students to experience research and tertiary education in Brisbane at QIMR Berghofer and partner sites, Brisbane for a work-experience program 10-14 August 2026.

The initiative combined school-wide learning, intensive laboratory workshops, discussion of locally relevant health issues, virtual-reality activities and career exploration with a subsequent five-day work-experience program at QIMR Berghofer and partner institutions Queensland University of Technology (QUT), the QUT Oodgeroo Unit and the University of Queensland Integrated Pathology Learning Centre.

Approximately 200 students participated through lectures and school-wide activities, engaging approximately 40 students in three days of intensive laboratory workshops, reaching at least 80 students through interactive virtual-reality sessions, and hosting five students and two accompanying teachers in Brisbane.

The project was designed to inspire young people in remote Queensland communities to see science, health and medical research as relevant to their lives and as attainable future pathways. It responded to educational disadvantage associated with geographic remoteness and aimed to reduce the practical and perceived distance between remote students, researchers and tertiary institutions.

Themes included parasites and bacteria affecting health, iron balance and nutrition, mental health, and the risks posed by viruses and mosquitoes, and career pathways in medical research and health. These topics provided a broad and locally meaningful foundation for the program. Students explored health conditions that disproportionately affect Aboriginal and Torres Strait Islander peoples in regional and remote areas while engaging with microbiology, molecular biology, nutrition, genetics, mental health, virology and cancer research.

Duration: Four school days, comprising three days of structured teaching and practical work and a concluding day of school-wide activities, review of results, feedback and presentation of certificates. Ten virtual-reality sessions (approximately 10 hours in total) were offered during breaks, afternoons and school-wide activities on the last day.

Activities included:

- introductory and specialist sessions on health and biomedical research topics
- practical microbiology, parasitology and molecular-biology activities
- learning about skin structure, the skin microbiome, scabies and other parasites, and the relationship between parasitic and bacterial skin infections;
- sessions on iron balance and nutrition, mental health and genetics;
- online interviews with QIMR Berghofer researchers about viruses, skin cancer
- career opportunities in the health and medical research space;
- virtual-reality science sessions offered to the wider school community; and

The program was led by Professor Katja Fischer and supported by researchers, students, professional staff and partner-institution educators who contributed their expertise and time. The Normanton teaching team

QLD Outreach: Science and Young Minds 2026

comprised Dr Deepani Fernando, Ms Sara Taylor, Dr Catherine Gordon, Associate Professor David Frazer, Dr Veronika Toth, Dr Luis Garcia-Marin and Mr Zuriel Ceja. Dr Cameron Bishop and Associate Professor Matthew Law contributed specialist virtual sessions.

The Brisbane program drew on additional contributions from four QIMR Berghofer science laboratory teams, including Dr Wilson Nguyen, Dr Nuzhat Surve, Ms Sara Taylor, Professor Amanda Spurdle, Dr Rehan Villani, Dr Daffodil Canson, Mr Michael Parsons, Professor Stacey Edwards, Ms Sneha Nair and Ms Lucy Ock. In addition, staff at the QIMR Berghofer facilities, in particular Dr Nirupama Nammunige from the Insectary and Mosquito Laboratory, Mr Drew Brockman, Mr. David McNeilly and Ms. Jasmine Healy from the Animal house and Dr Tam Hong Nguyen from the Microscopy and Spatial Cell Biology Facility showcased their workplace during this work experience program. Ms Madeleine Flynn and Mr Joshua Jansen provided insight into their expertise as Biocommunications Designer and Engagement & RAP Coordinator.

The project team gratefully acknowledges school coordinator Mr Mark Quadrio, Acting Deputy Principal, and the Normanton State School staff whose guidance and support were integral to the school-based program. We also thank accompanying teachers The program provided students with opportunities to:

• build practical laboratory skills and confidence through supervised, hands-on activities;

• strengthen their understanding of parasites, microbes, DNA, human biology and how research addresses health problems;

• connect scientific concepts with health issues relevant to remote and Aboriginal and Torres Strait Islander communities;

• meet researchers from varied disciplines and backgrounds and ask questions about study and career pathways;

• experience research institutes, universities and specialist facilities that are rarely accessible to remote communities; and

• recognise that there is no single pathway into health or science, and that curiosity, teamwork and continued learning provide valuable foundations.

Community members expressed hope that the program would broaden students' horizons, sustain their interest in science and help them recognise that such opportunities 'could take [them] anywhere'. The immediate value lies in student learning, confidence and exposure; the longer-term value lies in creating pathways. The program encouraged students to continue studying science, consider health and research careers, seek further work experience and tertiary education, and view medical research as a field in which remote and First Nations young people can participate and lead.

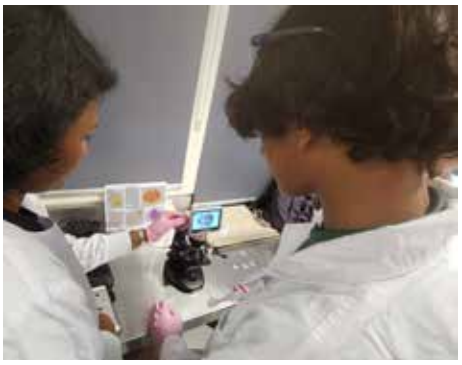
Science and Young Minds 2026 was made possible through co-sponsorship and in-kind support from QIMR Berghofer's Cancer Research, Brain and Mental Health, Infection and Inflammation, and Population Health Programs; the Rotary Club of Brisbane High-Rise; and the Australian Society for Parasitology. Their support enabled the team to deliver laboratory equipment and scientific expertise in Normanton and provide selected students with a fully sponsored, immersive work-experience program in Brisbane. We gratefully acknowledge Normanton State School, participating students and staff, parents and families, the QUT Oodgeroo Unit, QUT health educators, the UQ Integrated Pathology Learning Centre, and the many QIMR Berghofer researchers and professional staff who generously contributed their time, expertise, facilities, trust and support.



Students and teachers enjoying QIMR Berghofer's Science and Young Minds 2026 School Outreach Program This pogram received ASP funding through the State Outreach Funding scheme.

QLD Outreach: Science and Young Minds 2026












Beaker Street Festival, Tasmania State Outreach

Ten years ago, Dr Margo Adler founded Beaker Street – Tasmania's electric science festival held in the depths of Tasmanian winter. She had a vision for what a great night out might be: microscopes on bar tables, chatty scientists roving through the crowd and talks that would spark friendly debate. Her idea resonated, and Beaker Street is now among the most anticipated festivals on the national science calendar with sold out activities across the state.

Beaker Street is where science, art and culture come together. Live music, drinks, dancing and great conversations between strangers. The epicentre is in Hobart city, but there are exhibitions, events around town, and field trips. Possibly a favourite event is TMAG after dark, where the Tasmania Museum and Art Gallery open until late with the basement full of archive video games, live moth dissections by taxonomists and any invertebrates you're unsure of that you've snapped on your phone identified by resident entomologists.

Tasmania State Rep Kate Hutson joined the Beaker Street Science Festival to showcase the Australian Society for Parasitology and show visitors how to do faecal egg counts in ruminants. As a "Roving Scientist" she joined hundreds of other scientists that go to the festival each year, filling up pubs and chatting to complete strangers. Like speed-dating for scientists, the initiative gives the public an opportunity to meet scientists and talk about science. This event provided an excellent platform for community outreach as well as extending the ASP's science network.



ASP Tasmania State Rep, Kate Hutson at Beaker Street Festival, 2026

Ecology and Evolution of Infectious Disease: Asia–Pacific (EEID-AP) Tasmania State Outreach

The Ecology and Evolution of Infectious Disease: Asia–Pacific Chapter (EEID-AP 2026) hosted in Hobart, Tasmania, brought together approximately 200 delegates from across Asia, Oceania, and beyond to share cutting-edge research and practical advances in the ecology, evolution, and control of infectious diseases. The conference was supported by Cmbio, the Tasmanian School of Medicine and the Australian Society for Parasitology. Keynote speakers included Professor Peter Hudson (Penn State University, USA), Professor Hamish McCallum (Griffith University), Assistant Professor Amandine Gamble (Cornell University, USA), Dr Alex Callen (University of Newcastle), Dr Brett Gardner (University of Sydney), Dr Alison Peel (University of Sydney), Dr Rodrigo Hamede (University of Tasmania) and Dr Eloise Skinner (University of Sydney). EEID-AP 2026 focused on emerging and established pathogens across the region, with special emphasis on integrated approaches and innovative technologies. Key themes included highly pathogenic avian influenza, Tasmanian devil facial tumour disease, Antarctic/Island One Health, modelling and prediction, molecular and genomic techniques, and parasite evolution and host adaption. Conference organisation was led by Nick Fountain-Jones – an outstanding effort and hugely successful event!



Kate Hutson and Nick Fountain-Jones at the conference dinner at EEID-AP 2026 (below) Kate with Chris Niebuhr from Landcare Research, NZ.



Australian Oral-Systemic Infection & One Health Clinical Summit: Vic State Outreach

On 17–18 October 2026 in Melbourne, the Australian Oral-Systemic Infection & One Health Clinical Summit took place, bringing together clinicians, researchers and educators across dentistry, microbiology, parasitology, pathology, public health and integrative healthcare. This event was sponsored by the ASP with Dr **Patsy Zendejas-Heredia**, ASP's Victorian Representative, joining as special guest speaker.

Most parasitologists have, at some point, looked at a sample under the scope and wondered what a working clinician would make of it. Most clinicians, in turn, rarely get to look at a sample the way a parasitologist does. The two sides of that conversation don't often meet in the same room, and the mouth is one of the places where that gap shows up most clearly.

This Summit is an attempt to close it: a two-day, hands-on forum bringing dentistry, pathology, microbiology, parasitology, public health and integrative medicine together in Melbourne, this year proudly sponsored by the Australian Society for Parasitology (ASP), with ASP's Victorian Representative joining us as special guest speaker.

For parasitologists and microbiologists, the mouth is rarely the site under the scope. Chronic oral infection, root-treated teeth, dental materials and the organisms that inhabit them sit largely outside conventional parasitology and microbiology training and just as far outside a routine dental examination.

Australia currently has limited dedicated dental pathology infrastructure, and published Australian prevalence data on oral protozoa remain scarce. This Summit creates a dedicated forum where scientists can see the clinical picture directly, meet the practitioners collecting samples in real time, and start building the research and referral pathways that don't yet exist.

Speakers:

Dr Patsy A. Zendejas-Heredia. Parasitology and zoonotic diseases. ASP Victorian Representative. The Australian Society for Parasitology. Special guest speaker, joining us to welcome ASP members and colleagues and to open the parasitology discussion across both days.

Dr Eric Davis. Mercury, imaging and testing prior to removal. Blood chemistry interpretation, root canals, implants and clinical case material.

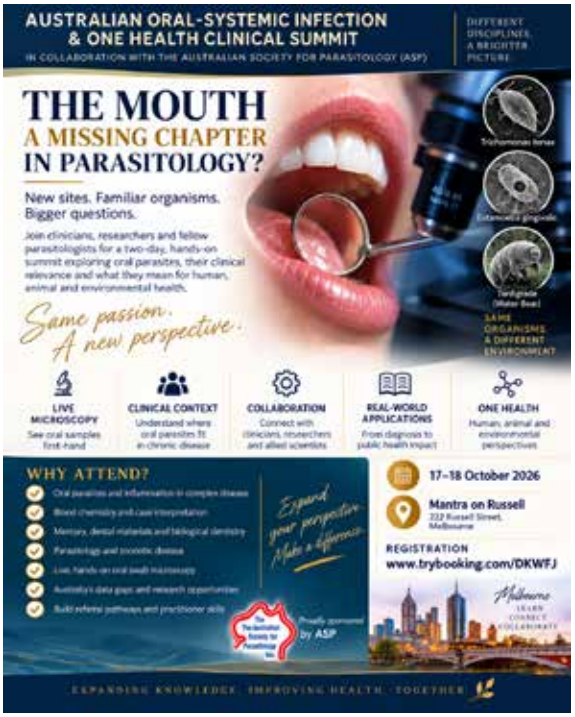
Blanche Grube (USA). Former biological dentist, mentored by the late Dr Hal Huggins, and owner of DNA ConneXions dental pathology laboratory.

Dr Simone Sleep. Infection Aware Oral Health, emerging oral protozoa research and Australia's Queensland feasibility pilot.

Susan Ruslan. Microscopy in clinical practice and what changes when you actually look at a patient's oral sample.

Anita Vazquez Tibau and Lisa Matisse. International mercury research, policy and advocacy.

The Infection Aware Oral Health Pilot Project is now progressing in Queensland as a small, 100-sample feasibility pilot focused on testing the practicality of sample collection, chair-side workflows and laboratory confirmation while beginning to generate preliminary Australian data. For scientists and researchers, the relevance is direct: the Summit is an opportunity to understand how the pilot works, what it is designed to test, and how you may connect with the practitioners generating this data as the network develops.



ASP at Sydney Science Trail for National Science Week 2026

ASP members Lisa Jones (ASP), Nick Smith (ASP), Claire Sayers (UNSW) and Michelle Power (Macquarie) ran hands-on parasite activites as part of the Sydney Science Trail for National Science Week in August 2026 at the Australian Museum.



Images from Sydney Science Trail at The Australian Museum for National Science Week acitvities in 2026

National Science Week 2026

ASP members Claire Sayers (UNSW), Lisa Jones (ASP) and Nick Smith (ASP) ran Crafty Parasites hands-on science activites as part of National Science Week in August 2026.



Images from National Science Week 2026 Crafty Parasites outreach activities at Sutherland Hospital School. Images copyright Vicki Williams, 2026

National Science Week 2026

ASP members Claire Sayers (UNSW), Lisa Jones (ASP) and Nick Smith (ASP) ran Crafty Parasites hands-on science activites as part of National Science Week in August 2026.



Images from National Science Week 2026 Crafty Parasites outreach activities at Crown St Public School, NSW. Images copyright Martin Thomas, 2026

National Science Week 2026 cont...





Images from National Science Week 2026 Crafty Parasites outreach activities at Crown St Public School, NSW. Images copyright Martin Thomas, 2026

National Science Week 2026 cont...



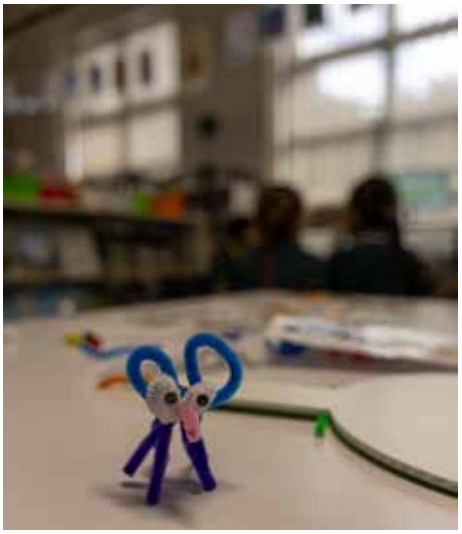












Images from National Science Week 2026 Crafty Parasites outreach activities at Crown St Public School, NSW. Images copyright Martin Thomas, 2026

STEM-tacular: WA State Outreach

The STEM-tacular program was hosted by The City of Gosnells, Gosnells Library for the general public to "Celebrate National Science Week with a huge day of hands-on STEM fun" through interactive workshops, live demonstrations, creative challenges and family-friendly activities (See program flyer). The day was well-attended by 530 members of the public (personal communication, Gosnells Librarian). ASP member Rina Wong (Fu) delivered a featured opening Show – STEM-TACULA! The show included interactive audience participation, live experiments coupled with storytelling, singing and drama. Audience aged from toddlers to a gentleman who was 92 years old and 2 people living with a non-hidden disability.

Addition to the STEM-tacular Show, Rina and her Engaging Children/ Community In Science (ECIS) team delivered a hands on workshop with parasite displays, culture experiments. Participants designed and created their own take-home parasites. Rina designed a worksheet that gets students to think about whether their unique creature would be an 'exo' or 'endo' parasite, that might target a human or animal host (or both), the route of infection and relate the structural design to function. Photo below shows the 'deadliness' of one designed by a 6-year-old (and Rina's reaction), as it enters via the skin and eats your brain.

The Australian Society for Parasitology was acknowledged at the event (logo displayed). Rina used the ASP outreach funds towards full colour photocopying of the 'Design Your Parasites' worksheets, models and consumables. The event was promoted by The City of Gosnells, the National Science Week website, and Rina's website & outreach social media. I believe this outreach was a great success in achieving ASP's goals to make pesky parasites lovable and interesting, making parasitology accessible and inclusive. This was evident by a carer bringing a young man with a disability to participate in our malaria feeding activity.













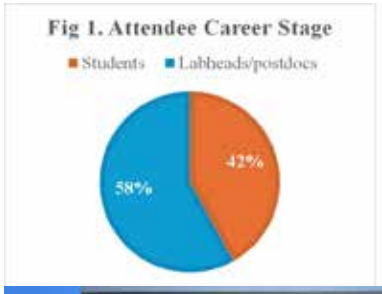


"STEM-tacular" with Rina Wong

QLD State Outreach: Malaria in QLD 2025

2025 Malaria in Queensland Symposium

The target audience for this event were research staff and students working in the field of malaria research in Queensland. In 2025, there were 65 attendees, an increase from 45 attendees in 2024 (inaugural event). Importantly from a professional development view, 42% of attendees were students (Fig. 1). Attendees for the event came from the University of Queensland, QIMR Berghofer, ADFMIDI, the University of Sunshine Coast, Griffith University, Obsidian Ventures & Consulting, International Medical University Malaysia (visiting student) and Rotary (Fig. 2).







The symposium had 20 speakers who presented on vaccines, immunology, diagnostics and drug discovery. There were also several posters displayed for discussion during the breaks. The speakers included ECR Dr Ghizal Siddiqui from the Monash Institute of Pharmaceutical Sciences, Monash University, as the ASP-funded Plenary Speaker. Dr Siddiqui spoke on "Chemoproteomic approaches to deconvolute drug targets for novel anti-malarial candidates.".

It was also a pleasure to include community involvement as part of the Symposium, with three Rotary community members joining. Mr Neil Bradley who gave an overview of the outstanding work of Rotarians Against Malaria PNG. The attendees were pleased to be able to acknowledge that RAM play such an important role in the global fight to eradicate malaria.

As the venue was provided free of charge by the Griffith University, registration fees and sponsorship were used to provide lunch and refreshments for the attendees during the day. The 2025 sponsors were Revvity, Thermo Fisher Scientific and Merck Life Science. These sponsors also set up very well rece3ived trade displays as part of the symposium. All sponsors, including ASP, were thanked in LinkedIn posts (an example linked here).

Thank you to the amazing organising committee: A/Prof Danielle Stanisic, Professor Katherine Andrews and Dr Jacinta Macdonald from the Griffith University Institute for Biomedicine and Glycomics, Dr Carla Proietti from the UQ Institute for Molecular Bioscience and Dr John Woodford from QIMR Berghofer. Thanks also to student volunteers Wisam Dawood (ASP member), Patrick Tumwebaze (ASP member), Rohith Kutty and Wong Hern.

SA State Outreach

"The Science of Parasites: Hidden Worlds, Hidden Risks," co-hosted with Science in the Pub Adelaide.

ASP previous SA State Representative, Sonja Folich coordinated a Science in the Pub event featuring ASP members and gives this report.

"The Science of Parasites: Hidden Worlds, Hidden Risks," co-hosted with Science in the Pub Adelaide, was a fitting way to close out my time as ASP SA State Representative.

I arrived in Adelaide in 2016, and joining this community not long after has been one of the constants of my time here. It's been a privilege to watch it grow, particularly in molecular parasitology, the area that was my own research focus before I moved into a defence-facing role with Adelaide University. Seeing that space flourish, with strong HDR training pipelines and a new generation of research leaders coming through, has been one of the most rewarding parts of being involved with our Society.

Friday's event felt like the right note to end on. The Adelaide Irish Club was packed with both ASP members and the public, itself a marker of how far our community's reach has come. Three speakers gave the room a real sense of what our field looks like today: Dr Melanie Ridgway on drug resistance in the parasites behind malaria and trypanosomiasis, Kaitlin Turland on malaria parasite antigens and immune evasion, and Dr Gerrut Norval on tick ecology and the ecological role parasites play that's often overlooked. It also doubled as ASP SA's first member get-together for 2026, which felt fitting given how much the community itself has been the story.

I'm pleased to hand the role of the role on to Di Burton, who brings decades of experience from her work with SARDI and PIRSA. Having met her in person on Friday night, I am certain the Society will only get stronger under her leadership.



Thank you to everyone who's been part of this community with me over the years, to our three speakers for such a strong outreach event, and to Science in the Pub Adelaide for the partnership.

It's been a privilege.

Sonja

SA State Outreach

A wonderful night of "The Science of Parasites: Hidden Worlds, Hidden Risks," co-hosted with Science in the Pub Adelaide, Friday 31st July 2026.











ACT State Outreach Symposium



Volume 37 Issue No.1 October 2026

ASP Parasite Podcast: What's eating you?

Welcome to What's eating you? the Parasite Podcast for the Australian Society for Parasitology.



"What's eating you?" ASP Parasite Podcast presenters (L-R) Alexandra Hudson, Sarah Preston and Lisa Jones with guest speaker Amanda Ash (below)

Join hosts Dr Sarah Preston from Federation University Australia, Lisa Jones, from the ASP and visiting comedian, the amazing comedian, Alexandra Hudson! Our "What's eating you?" team will question, quiz, and grill our expert parasitologists from the ASP.

Join us on our funny, informative, and always serious about science Parasite Podcast "What's eating you?". Find us where ever you listen to your podcasts! https://www.parasite.org.au/education/whats-eating-you-podcast/

Episode 8 of ASP Parasite Podcast: What's eating you? is all about *taenia,* a tapeworm parasite.

Our expert parasitologist is Dr Amanda Ash from Murdoch University. Amanda's research focus is on the prevention treatment and control of parasitic diseases in wildlife, humans, livestock and companion animals, in particular zoonotic parasites which are transmitted between animals and humans. Over the past 10 years Amanda has been conducting research in Lao PDR on the zoonotic tapeworm *Taenia solium* and Soil Transmitted Helminths. For this story, Amanda gave us her expert opinion about the zoonotic tapeworm *Taenia solium.*



CiP Alumni Corner

2025 CiP alumni, Larissa Pereira Rodrigues, won an Elsevier/ IJP/ASP Award to attend the 2025 Concepts in Parasitology (CiP) course at Moreton Bay Research Centre. Larissa is profiled below:

Larissa Pereira Rodrigues, 2025 CiP alumni profile

My name is Larissa Pereira Rodrigues, I am a Brazilian biologist passionate about wildlife. Since 2019, I have been working with wild rodents and marsupials, gaining ield and laboratory experience that shaped my scientific career. I am currently in the final stage of my PhD studies in the Graduate Program in Wild Animals at São Paulo State University (UNESP). My doctoral research involves molecular and histopathological investigations of trypanosomatids using samples from animals captured in the Amazon, with the aim of understanding their role as reservoirs in the ecology of wildlife diseases. I believe that deepening our knowledge about pathogens in wildlife is essential not only for biodiversity conservation but also for strengthening public health strategies in Brazil, where significant resources are dedicated to controlling and treating leishmaniasis and Chagas disease, which are considered neglected tropical diseases.



Larissa Pereira Rodrigues

Taking part in CiP was, without a doubt, one of the most extraordinary experiences of my life, both personally and professionally. It was an opportunity to discover a completely new country and culture, learn new techniques, work with technologies I had not encountered before, and, most importantly, broaden my knowledge of parasitology.

It was also very special to meet people from different parts of the world and attend incredible classes taught by renowned professionals in the field. The whole experience broadened my horizons and allowed me to see new possibilities for my career as a researcher.

After CiP, I completed my PhD and started a postdoctoral position, continuing my research on parasites of wild animals, particularly those associated with Brazilian marsupials. I hope to continue developing my research career and contributing to our understanding of the diversity and importance of these parasites.

Beyond its scientific importance, CiP had a very special personal meaning for me. I was the first person in my family to travel outside Brazil, and being able to have an international experience like this was a great honour. It is something I never imagined would be possible for me, and it only happened because of science and education.

For this reason, I see CiP not only as an academic experience, but also as an example of how science and education can transform lives and open doors that once seemed impossible. I am deeply grateful for this opportunity and for everything it has added to my journey.

Looking ahead, I hope to continue my career in research and, who knows, perhaps have the opportunity to return to Australia one day. It would be very special to return to the country where I had such a transformative

CiP Alumni Corner

2025 CiP alumni, Grace Reeves, won an Elsevier/IJP/ASP Award to attend the 2025 Concepts in Parasitology (CiP) course at Moreton Bay Research Centre. Grace is profiled below:

experience and to be able to share everything I have built since then.

Grace Reeves, 2025 CiP alumni profile

I'm Grace Reeves, a PhD candidate at the University of Queensland's School of Veterinary Science. My research focuses on the epidemiology of vector-borne pathogens in invasive animal populations from a One Health perspective, particularly the role species such as wild dogs, foxes, feral cats and deer may play in pathogen transmission and what this means for animal, human and environmental health.

Attending CiP has helped me in so many ways beyond simply learning more about parasites. It opened my eyes to different career paths in parasitology and gave me the opportunity to network and form friendships with students and researchers from Australia and overseas. It has been great seeing familiar faces again at ASP conferences and continuing the connections that started at CiP.

The lectures and practicals were engaging and covered such a wide range of topics that the time flew by. Attending CiP was a great decision and has helped shape what I hope to do in the future. As I continue my PhD, I hope to apply the skills and experiences I gained at CiP to both my research and outreach, particularly working with Aboriginal communities to support parasite education, prevention and animal health through a One Health approach.



Grace Reeves

CiP Alumni Corner

2025 CiP alumni, at the 2025 Concepts in Parasitology (CiP) course at Moreton Bay Research Centre.

Concepts in Parasitology
A two-week parasitology course for postgraduates and Early Career Researchers





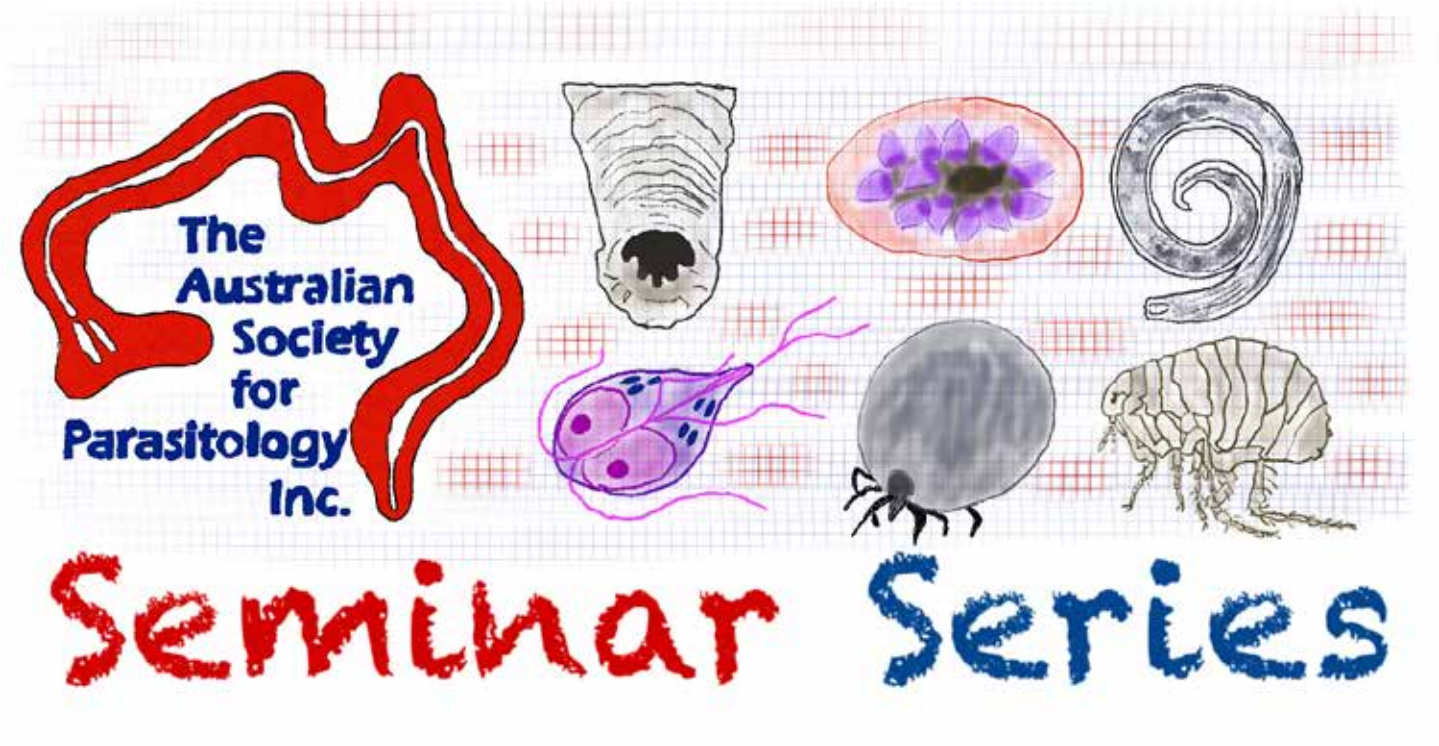








ASP Seminar Series



Join us for the final ASP Online Seminar for 2026:

Friday 20th November 2026 @1pm AEDT, featuring Josh Levendis, University of Melbourne presenting "The RNA modification m6A positions polyadenylation in Plasmodium falciparum" and Alex Harris, Burnet Institute presenting "Repeated malaria vaccine booster doses in children shapes protective antibody responses" with co-chairs Karan Singh, WEHI and Kaitlin Turland, Adelaide University.

The last online ASP Seminar Series for this year on Friday 20th November 2026 @1pm AEDT, featuring Josh Levendis, University of Melbourne presenting "The RNA modification m6A positions polyadenylation in *Plasmodium falciparum*" and Alex Harris, Burnet Institute presenting "Repeated malaria vaccine booster doses in children shapes protective antibody responses" with co-chairs Karan Singh and Kaitlin Turland, Adelaide University.

https://www.parasite.org.au/blog/asp-online-seminar-series-friday-20-november-1pm-aedt/

Josh Levendis is a 2nd year PhD student at Bio21, The University of Melbourne. He is a member of the Ralph lab, where he completed an undergraduate project and Honours. Before studying molecular biology, he worked as an embedded software engineer making broadcast equipment and data storage. Now, he's interested in changing RNA modification programs in vivo and using long read sequencing to understand parasite development. He recently obtained a chess.com rating of 1600 which he is pretty chuffed about.

Alex Harris is a third-year PhD candidate in the 'Malaria Immunity and Vaccines group' at the Burnet Institute, supervised by Liriye Kurtovic, Adam Thomas, and James Beeson. His work focuses on better understanding the immune response induced by the RTS,S malaria vaccine in children. His research investigates Fc dependent functional antibody responses induced following RTS,S vaccination in children and their associated cellular effector functions. By understanding the determinants of optimal immunity to malaria, he aims to inform optimal vaccine policy and the development of next-generation vaccines. Alex completed his Bachelor of Science at Monash University, majoring in immunology and physiology, in 2021. In 2022, he completed an honours research project at Burnet Institute, then worked as a research assistant, before starting his PhD in 2024.

Our online ASP Seminar Series Friday 16 October @1pm AEDT, featured Melissa Carabott, RMIT presenting "Advancing Diagnostics and Monitoring for Blood Flukes in

ASP Seminar Series continued









Our seminar speakers (from L-R) Melissa Carabott, RMIT, Sarah Farrell, The University of Melbourne, Alex Harris, Burnet Institute, Josh Levendis, University of Melbourne

Bluefin Tuna Aquaculture" and Sarah Farrell, PhD student, The University of Melbourne presenting "Medicating mosquitoes to block parasite transmission." with co-chairs Ben Liffner, Adelaide University and Karan Singh, WEHI.

https://www.parasite.org.au/blog/asp-online-seminar-series-friday-16-october-1pm-aedt/

Dr **Melissa Carabott** completed her PhD at RMIT University, investigating diagnostic approaches to improve blood fluke monitoring in global bluefin tuna aquaculture. Her research evaluated sampling bias, assessed non-lethal sampling strategies, and designed species-specific molecular diagnostics for field use, providing updated insight into blood fluke infection dynamics in Australian and Japanese aquaculture systems.

Sarah Farrell is a second-year PhD student in Geoff McFadden's malaria research lab at the University of Melbourne. She has a keen interest in researching new strategies to control the spread of malaria by targeting the parasite inside the mosquito host.

Our online ASP Seminar Series Friday 18 September @1pm AEST, featured Lena Chng, PhD Student, Walter and Eliza Hall Institute presenting "Identification and Characterisation of *Cryptosporidium* Effector Proteins in Host-Pathogen Interaction" and Frank Weate, PhD student, University of New South Wales presenting "Deep Learning in Malaria, from Parasite Detection to Interaction Discovery" with chair Ben Liffner, Adelaide University.

https://www.parasite.org.au/blog/asp-online-seminar-series-friday-18-september-1pm-aest/

Lena Chng was born and raised in Singapore, completed her BSc at University of Queensland before moving on to a Genomics lab in Singapore conducting surveillance of zoonotic pathogens – where she worked with bats and small rodents. Lena was interested in doing a PhD and returning to Australia, hence found her way to Chris Tonkin's lab which focuses on host-pathogen interaction in apicomplexans.

Frank Weate is a PhD student in the Baum Lab at UNSW whose research applies deep learning and data science to malaria research. His work incorporates computer vision, through the parasite detection tool PlasmoCount, and structural bioinformatics, with a focus on proteome-wide prediction of protein-protein interactions (PPIs).

Celebrate National Science Week 2026! Our online ASP Seminar Series Friday 21 August @1pm AEST, featured Jill Chmielewski, Walter and Eliza Hall Institute of Medical Research presenting "Nanobodies against *Plasmodium vivax* AMA1 block parasite invasion" and PhD student Brenna Daily, The University of Queensland, presenting "Multi-omics approaches to understanding host immune heterogeneity in Plasmodium infection" with chair Ben Liffner, Adelaide University.

https://www.parasite.org.au/blog/asp-online-seminar-series-fri-21aug/

Dr **Jill Chmielewski,** Walter and Eliza Hall Institute of Medical Research, is a member of the Tham Lab and pictured here in the Galleria with her 2025 Art of science entry "Eligy for an egg". After completing her

ASP Seminar Series continued









Our seminar speakers (from L-R) Frank Weate, University of New South Wales Lena Chng, Walter and Eliza Hall Institute, Brenna Daily, The University of Queensland, Jill Chmielewski, Walter and Eliza Hall Institute

PhD at the University of Adelaide in 2023 under the supervision of A/Prof. Danny Wilson, Jill began a postdoctoral position at The Walter and Eliza Hall Institute of Medical Research in the laboratory of Prof. Wai-Hong Tham. Her research uses molecular parasitology and functional evaluation of antibody-based therapeutics targeting malaria parasites to help prioritise candidates with vaccine or therapeutic potential.

Brenna Daily, The University of Queensland completed her BSc in Forensic investigation and analysis from Atlantic Technological University Sligo in 2021, where she completed research in genetic mutational status and tumour-inflammatory response in metastatic cancer in my final year. Brenna completed her MSc in Toxicology at the University in Galway in 2022 and is in her third year of a PhD in molecular immunology under the supervision Prof Denise Doolan at the Institute of Molecular Bioscience, UQ.

Our online ASP Seminar Series Friday 17 July @1pm AEST, featured Vincent C. Duru, BUA Joint PhD Scholar (BER-MEL Network) The University of Melbourne presenting "First in vitro feeding of an Australian wildlife tick, Ixodes hirsti, provides insights into tick morphology and microbiome" and Nicole (Nic) Addams, PhD Student with the Jex Lab, Walter and Eliza Hall Institute presenting "The eukaryotic-emerged spliceosome and spliceosomal introns in the early-diverging protist pathogen Giardia duodenalis" with co-chairs Ben Liffner, University of Adelaide and Grace Peters, University of New South Wales.

https://www.parasite.org.au/blog/asp-online-seminar-series-fri-17-july/

Vincent Duru is a Berlin Universities Alliance Doctoral Scholar (BUA MEL-BER Network) completing a Joint PhD between Freie Universität Berlin and the University of Melbourne. Over the past three years, he's been persuading ticks to feed in the lab (yes, that's basically what I do!) developing in vitro models to study tick–pathogen interactions in Ixodes ticks. Originally from Nigeria, he holds a BSc in Parasitology & Entomology and an MSc in Public Health Biotechnology. His research aims to develop innovative strategies for studying the biology and transmission dynamics of ticks and tick-borne pathogens.

Nic Addams is a PhD candidate at the WEHI, where she is a member of the Jex Lab. Before commencing her doctoral research, she earned her Masters in plant science. Her broader research interests include molecular evolution and systems biology. Outside of the lab, Nic has far too many hobbies and cats.

Our online ASP Seminar Series Friday 19 June @1pm AEST, featured Joe van den Bergh, Adelaide University presenting "Developing Expansion Microscopy for Whole Arthropods" and Rebecca Farnell, Federation University presenting "Preparing for climate change: Enhanced *Haemonchus contortus* parasite surveillance in sheep in the Australian state of Victoria" with co-chairs Ben Liffner, University of Adelaide and Grace Peters, University of New South Wales.

https://www.parasite.org.au/blog/asp-online-seminar-series-fri-19-june/

ASP Seminar Series continued







Our seminar speakers (from L-R) Jem Murdoch, University of New South Wales, Lenin De Silva Manage, Murdoch University and Joanne Lee, Australian National University

Joe van den Bergh is a recently graduated honours student from Ben Liffners lab at Adelaide University where he did his honours project on the presenting topic, making a method for expansion microscopy to work with whole arthropods. With further background studying microbiology and evolutionary biology at the University of Adelaide (now Adelaide University).

Rebecca Farnell (Bec) is currently completing her PhD at Federation University. The work compares diagnostic techniques for state-wide surveillance for gastrointestinal nematodes – particularly Haemonchus contortus – in sheep. This work aspires to support the industry in uptake of on-farm surveillance methods, and support farm enterprises through mapping of species across Victoria to provide farmers with this information via an online, accessible platform.

Our online ASP Seminar Series Friday 15 May @1pm AEST, featured Karan Singh, WEHI, presenting "The role of Ubiquitin during Toxoplasma Differentiation" and Katrina Larcher, WEHI presenting "*Plasmodium falciparum* GAPM proteins are required for merozoite invasion and gametocyte maturation" with co-chairs Ben Liffner, University of Adelaide and Grace Peters, University of New South Wales.

https://www.parasite.org.au/blog/asp-online-seminar-series-fri-15may/

Katrina Larcher joined the McCarthy lab at The Walter and Eliza Hall Institute for Medical Research in 2023 as an honours student where she continued on as a research assistant and has just now started a PhD investigating cytoskeletal structures.

Karan Singh is a 3rd year PhD student in the Tonkin Lab at The Walter and Eliza Hall Institute for Medical Research in Melbourne. Karan obtained his Bachelor of Technology and Master of Technology specializing in Biochemical Engineering in India. He now works to understand the ubiquitin signaling system in *Toxoplasma gondii.*

Our online ASP Seminar Series Friday 17 April @1pm AEST, featured Meghan Zadow, The University of Adelaide, presenting "Complementary proteomics approaches for identification of interacting partners and function of the *Plasmodium falciparum* regulatory protein Alba4" and Hayley DeCristi, The University of Sydney presenting"Growth and development of *Fasciola hepatica* on an in vitro 3D cell culture model: how does it compare to in vivo?" with co-chairs Ben Liffner, University of Adelaide and Grace Peters, University of New South Wales.

https://www.parasite.org.au/blog/asp-online-seminar-series-fri-17april-1pm/

Meghan Zadow is a final-year PhD candidate at Adelaide University where she investigates proteins controlling replication, transcription, and translation in the malaria-causing parasite *Plasmodium falciparum.* Her research combines gene-editing and proteomics approaches to characterise the protein interaction networks of target proteins and uncover their roles during parasite blood stage development. Meghan is also passionate about developing novel molecular tools and experimental approaches to study divergent organisms like Plasmodium, where available methodologies and resources often lag behind those of model systems. Meghan's seminar is also highlighting World Malaria Day 2026.

Hayley DeCristi, from Florida, USA, has dedicated her career to the fields of animal science and health. She completed a Bachelor of Science at the University of South

ASP Seminar Series continued



Our seminar speakers (from L-R) Ashton Kelly, University of Queensland and Frankie Lyons, Walter and Eliza Hall Institute

Florida majoring in Integrative Animal Biology in May 2022, before immersing herself in hands-on experience. Hayley has worked in a kennel for three years and served as a veterinary technician for one year, honing her skills and deepening her understanding of animal care. In 2024, she undertook a volunteer research internship with Nichola Calvani hosted by The Education Abroad Network (TEAN). While in the lab, she assisted AVBS honours student Chelsie Uthayakumar in her 'Beyond Suspicion' *Fasciola hepatica* drug resistance project by conducting coprological ELISAs and faecal PCRs to validate traditional diagnostics (sedimentation and faecal egg count) pre- and post-drug treatment. During her time in the lab, she fell in love with the research side of science and enjoyed how animal welfare was still deeply intertwined with it. This led her to current status as a MPhil student researching Fasciola hepatica and investigating the drivers of their early development within the host.

Our online ASP Seminar Series Friday 20 March @1pm AEDT, featured Simona Seizova, Walter and Eliza Hall Institute, presenting "*Cryptosporidium*: the new frontier of molecular parasitology" with co-chairs Ben Liffner, University of Adelaide and Grace Peters, University of New South Wales. This is also World Parasitology Awareness Day!

https://www.parasite.org.au/blog/asp-online-seminar-series-fri-20-mar-aedt-2/

Simona Seizova did her PhD at WEHI looking to understand host-pathogen interactions of chronic Toxoplasma gondii before moving to Dundee, Scotland in 2021 to undertake her Postdoctoral studies. Simona worked on drug development for *Cryptosporidium parvum,* learning the newest techniques on making and propagating genetically modified parasites. In 2024 Simona returned to WEHI to set up the first molecular *Cryptosporidium* program with the capacity to make transgenic parasites in Australia.

Please get in touch with co-chairs Ben Liffner, University of Adelaide, Kaitlin Turlan, Adelaide University or Karan Singh, WEHI or email secretary@parasite.org.au with suggested speakers!



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If you an ECR looking to build a track record in peer review, get a head start with the IJP suite of journals by logging in or creating a profile at the Elsevier "Reviewer Hub" (https://www.elsevier.com/reviewer). Then simply select the IJP journals you would like to review manuscripts for and editors will be notified when looking for suitable reviewers!

Thank you for contributing to the ASP

ASP Journal Editors and ASP Council

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Thank you Maria Mueleman, FASP

At the 2026 ASP Annual Conference, ASP members were able to thank Fellow of the ASP, Maria Meuleman, for her incredible years of service as Editorial Assistant for IJP.

Maria has been a vital part of the IJP Editorial process since 1995 and has provided assistance for ASP members who publish with the Journal. Thank you Maria, and best wishes for the next chapter of your life.

Pictured below with current and past IJP Editorial team members from left: Jan Slapeta, Maria Mueleman, Alex Loukas and Brian Cooke.



Jan Slapeta, Maria Meuleman, Alex Loukas, Brian Cooke.

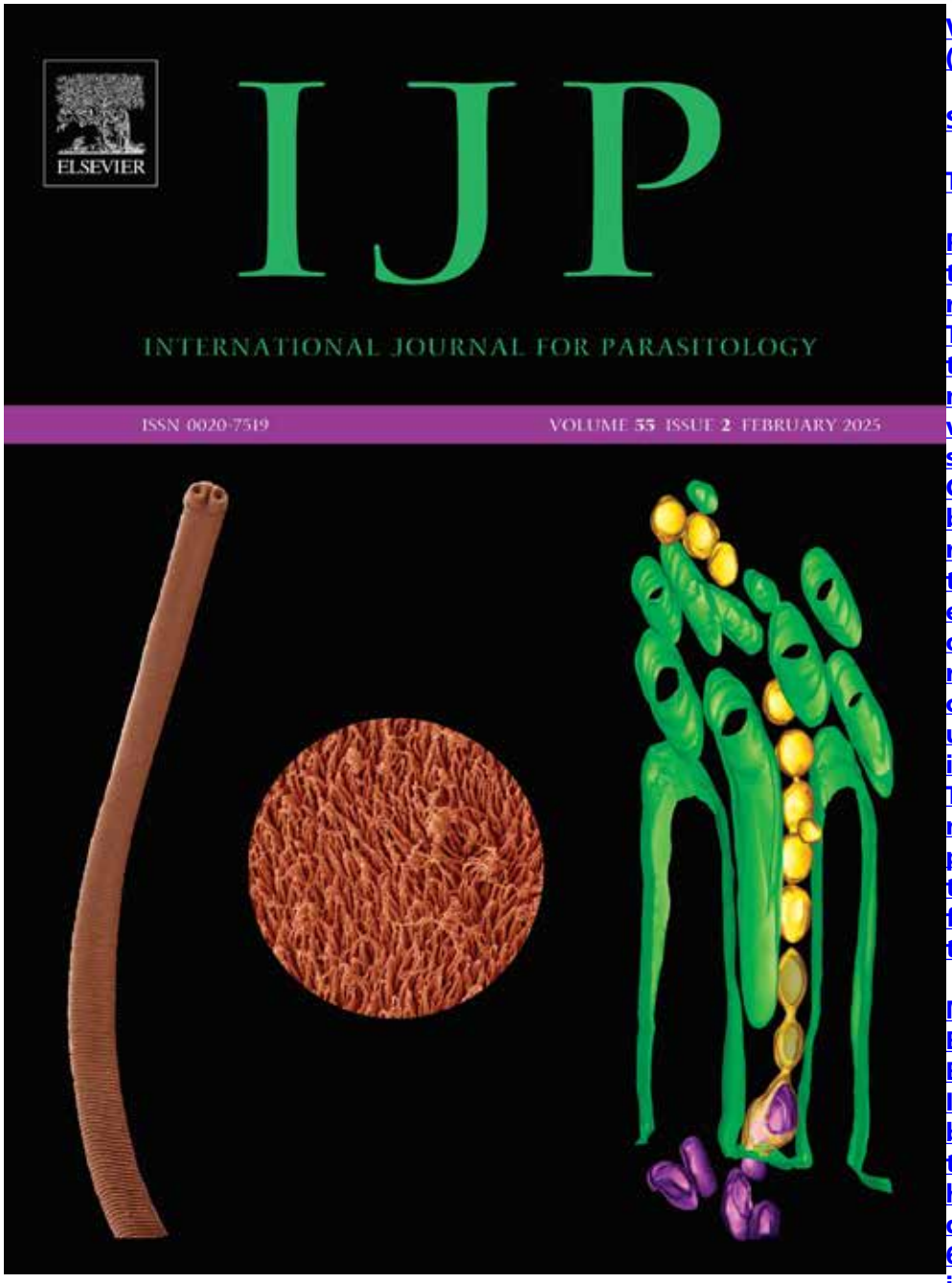
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Volume 55, Issue 2, Pages 69-136 (February 2025)

Story behind the cover

Tapeworm surface structures

Photomicrographs of the tapeworm Hymenolepis diminuta reveal intricate surface structures. The anterior region (left) of the tapeworm and detailed microtriches (center) were visualized and coloured using scanning electron microscopy. Complementing this, a 3D model based on electron tomography reconstruction (right) highlights the microtriches (green) and extracellular vesicles (yellow) on the surface. These vesicles, released from the worm's surface, contain proteomic cargo (purple), underscoring their potential role in host-parasite interactions. This combined approach of microscopy and 3D modeling provides valuable insights into the structural complexity and functional dynamics of the tapeworm's surface.

Mazanec, H., Sotillo, J., Koník, P., Bušková, N., Kyslík, J., Gardian, Z., Bílý, T., Jirků, K., Kuchta, R., 2025. Insights into extracellular vesicle biogenesis and secretion of the tapeworm Hymenolepis diminuta: host interaction and cultivation dynamics. Int. J. Parasitol. 55, 69-77. https://doi.org/10.1016/j.ijpara.2024.11.005

International Journal for Parasitology continued

IJP

INTERNATIONAL JOURNAL FOR PARASITOLOGY



Volume 55, Issues 3–4, Pages 137-212 (March 2025)

Story behind the cover

Haemosporidian parasites in songbirds

Songbirds are common hosts of multiple haemosporidian lineages. The use of high-throughput sequencing allows efficient screening of haemosporidian diversity in passerine blood samples. Sequence data collected from three populations of two bluethroat subspecies (Luscinia svecica svecica and Luscinia svecica cyanecula), including a near extinct population from the Krkonoše National Park in Czechia, showed markedly higher species diversity than a previous Sanger sequencing study. Furthermore, a structuring of haemosporidian species diversity related to the habitat origin of the hosts was seen. These findings highlight the importance of advanced molecular techniques in revealing the hidden diversity of parasites, while knowledge on local diversity of haemosporidians in a threatened population of the host also has implications for possible conservation strategies.

Damnjanović, D., Nazarizadeh, M., Pavel, V., Chutný, B., Johnsen, A., Nováková, M., Štefka, J., 2025. Expanding the known haemosporidian parasite diversity in Eurasian bluethroat (Luscinia svecica) subspecies through amplicon sequencing. Int. J. Parasitol. 55, 137-150.

https://doi.org/10.1016/j.ijpara.2024.11.007

Original cover image (a male Red-spotted Bluethroat) provided by Jan Štefka, University of South Bohemia, Czechia

International Journal for Parasitology continued

IJP

INTERNATIONAL JOURNAL FOR PARASITOLOGY



April 2025 (55:05)

Story behind the cover

Not so black and white: the toll of Lotmaria passim on honey bee behaviour

Lotmaria passim is a commonly encountered digestive tract parasite of the honey bee. We investigated the effect of this parasite on honey bee physiology and foraging behaviour on its own and in conjunction with another gut parasite, Nosema ceranae. On its own, we found that L. passim had a significant effect on adult bee physiology, speeding up maturation. When paired with N. ceranae, we saw significant deleterious effects on both the physiology and foraging behaviour of adult bees. Our findings show that the effect of L. passim on individual bees can lead to repercussions for the health of honey bee colonies.

MacInnis, C.I., Luong, L.T., Pernal, S.F., 2025. Effects of Nosema ceranae and Lotmaria passim infections on honey bee foraging behaviour and physiology. Int. J. Parasitol. 55, 213-223.

https://doi.org/10.1016/j.ijpara.2024.12.003

Cover image courtesy of C. MacInnis, University of Alberta, Canada.

International Journal for Parasitology continued

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June 2025 (55:07)

Story behind the cover

Unlocking the Secrets of the shellfish parasite, Perkinsus olseni.

The protozoan parasite Perkinsus olsenican infects over 30 shellfish species, with recent increasing cases in mussels and abalone (paua). This study presents the first successful isolation and laboratory culture of P. olseni from New Zealand's green-lipped mussel, Perna canaliculus. Optimized culture protocols revealed optimal parasite proliferation at 22 °C, with a decline above 30 °C. A previously unreported reproductive mode was observed under nutritional stress, while the addition of mussel hemolymph to the culture triggered rapid zoospore release. Optimised culture methods offer a strong platform for future research to understand how P. olseni can cause disease (perkinsosis) and the potential impact of the parasite on various shellfish aquaculture industries globally.

Delisle, L., Bui, T., Copedo, J., Laroche, O., von Ammon, U., Lane, H.S., Hutson, K.S., 2025. Isolation, culture, and optimal growth conditions for the shellfish protozoan parasite, Perkinsus olseni. Int. J. Parasitol. 55, 339-350.

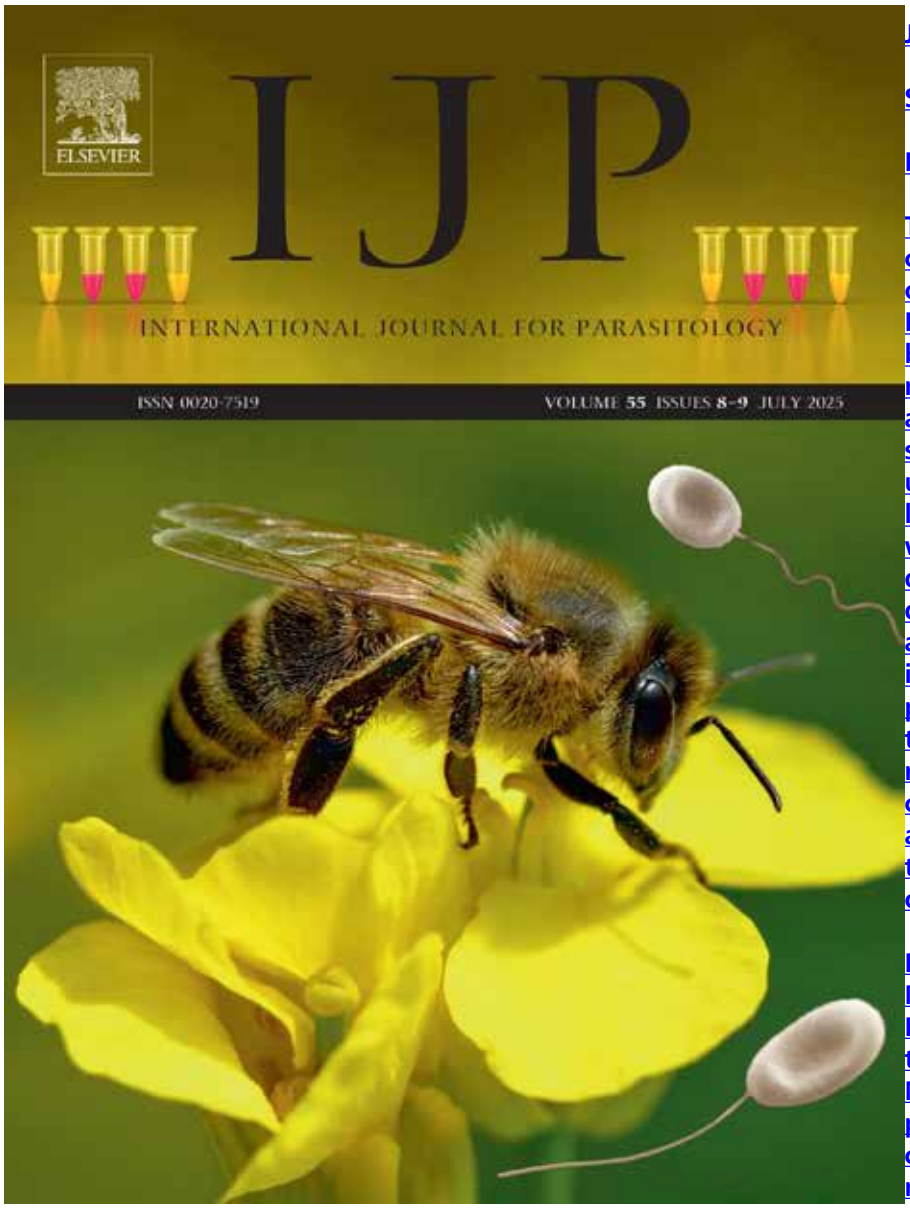
https://doi.org/10.1016/j.ijpara.2025.04.011

Original image courtesy of Lizenn Delisle (Cawthron Institute, Nelson, New Zealand)

International Journal for Parasitology continued

IJP

INTERNATIONAL JOURNAL FOR PARASITOLOGY



July 2025 (55: 08-09)

Short story behind the cover

Detecting threats to bee health.

The world's food supply depends to a considerable extent on the pollination of crops by the Western honeybee. However, bee health is threatened by several pathogens, including the microsporidian parasites Nosema apis and Nosema ceranae. Bees can tolerate surprisingly high infection loads of up to one million spores, but their lifespan shortens, and the risk of colony winter losses increases. Molecular detection enables identification and distinction between the more assertive and pathogenic N. ceranae, which is distributed globally, and the less pathogenic N. apis, which is endemic to Europe. In this study, we developed rapid, highly sensitive, and cost-effective colorimetric loop-mediated isothermal amplification (LAMP) assays that enable the specific detection and differentiation of N. apis and N. ceranae.

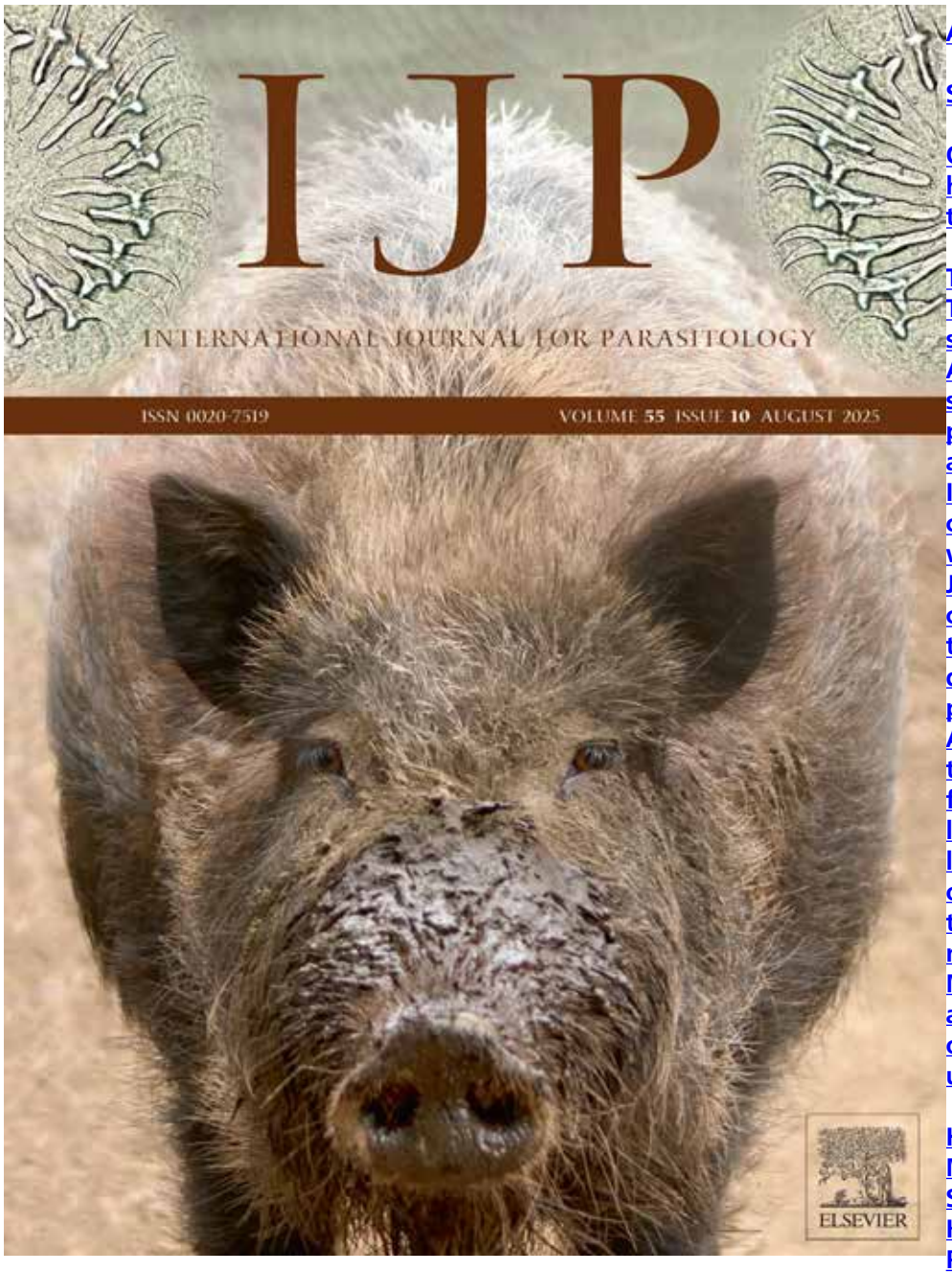
Lannutti, L., Gisder, S., Florin-Christensen, M., Genersch, E., Schnittger, L., 2025. Development of a ptp2-LAMP assay for the specific and sensitive detection of Nosema apis and its comparison with ptp3-LAMP for the detection of Nosema ceranae, in a region endemic for both microsporidium pathogens of the Western honey bee. Int. J. Parasitol. 55, 405-416. doi: https://doi.org/10.1016/j.ijpara.2025.04.001

Original image of honeybee (Apis mellifera) on a yellow flower (Brassica napus) by Ivar Leidus modified and reproduced with permission (creativecommons.org/licenses/by-sa/4.0/). Original images of LAMP colorimetric assay and Nosema spores courtesy of Lucas Lannutti and Elke Genersch and Sebastian Gisder respectively

International Journal for Parasitology continued

IJP

INTERNATIONAL JOURNAL FOR PARASITOLOGY



August 2025 (55:10)

Story behind the cover

On the origins of Taenia solium: how did humans acquire this tapeworm?

The morphological similarity of Taenia solium to African Taenia species has led to the "Out of Africa" hypothesis, which posits a sub-Saharan African origin for the parasite with subsequent dispersal accompanying human migration. In this study, genetic analyses of cysticerci identified in Japanese wild boars from Nagano Prefecture, Japan – a region generally considered non-endemic, revealed that they possess a haplotype distinct from haplogroups previously reported in Asia, Africa/America, and Bhutan. Remarkably, the Japanese haplotype diverged first from other haplogroups likely in the Early Pleistocene, long before human dispersal out of Africa. These findings suggest that the "Out of Africa" hypothesis may warrant reconsideration. Modern humans could have acquired T. solium in multiple parts of the Palearctic from previously unidentified definitive hosts.

Hayashi, N., Kuwamoto, R., Okada, M., Suzuki, K., Hoketsu, T., Kelava, S., Ohari, Y., Okamoto, M., Yagi, K., Nonaka, N., Nakao, R., 2025. Phylogenetic characterization of the pork tapeworm Taenia solium in Japan: implications for the enigmatic evolutionary history. Int. J. Parasitol. 55, 497-508. doi: https://doi.org/10.1016/j.ijpara.2025.04.009

Original image courtesy of Naoki Hayashi, Hokkaido University, Japan.

International Journal for Parasitology continued

IJP

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September 2025 (55:11)

Story behind the cover

The diverse functional roles of Alba proteins in Protozoan parasite gene and protein regulation.

Alba DNA/RNA-binding proteins are found across all domains of life and maintain diverse functional roles in cell regulation. It has become increasingly apparent that Alba proteins play essential regulatory roles in Protozoan parasite species including Plasmodium, Leishmania, Toxoplasma, and Trypanosoma. In this review, we highlight key biological processes known to have Alba protein involvement in these organisms including parasite development, survival, and virulence. We also identify previously unreported C-terminal Alba domain motifs and propose new Alba annotations for several currently unannotated protozoan Alba-like proteins.

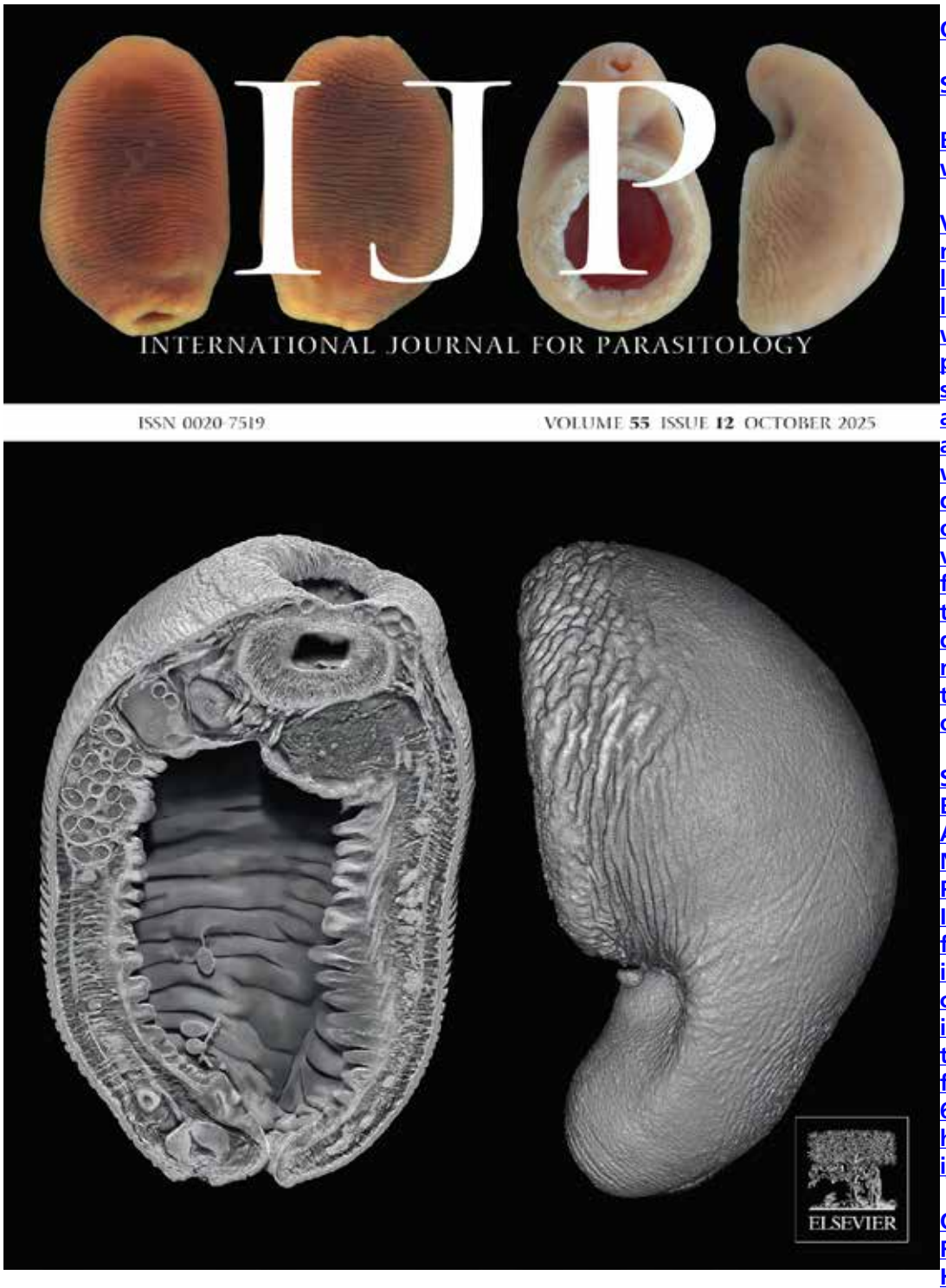
Zadow, M.E., MacRaild, C.A., Creek, D.J., Wilson, D.W., 2025. Alba protein-mediated gene and protein regulation in protozoan parasites. Int. J. Parasitol 55, 557-568. doi: https://doi.org/10.1016/j.ijpara.2025.04.013

Original image courtesy of Meghan Zadow and Danny Wilson, University of Adelaide, Australia.

International Journal for Parasitology continued

IJP

INTERNATIONAL JOURNAL FOR PARASITOLOGY



October 2025 (55:12)

Story behind the cover

Bombarding parasitic worms with X-rays

Valuing the precious museum collections (aka libraries of life) we were looking for non-destructive ways to study specific parasites that live in the stomach of herbivores. By adding specific chemicals and "bombarding" these worms with X-rays we discovered that this type of imaging can beautifully visualize diagnostic features. This non-invasive technique opens the door to study many more natural history collections to support current research on parasite diversity.

Schols, R., Henrard, A., Brecko, J., Mudavanhu, A., Goossens, E., Steffanie, N., Clegg, S., Vanhove, M. P. M., & Huyse, T. (2025). Innovating stomach fluke identification: an integrative approach combining Micro-CT imaging and molecular tools. International Journal for Parasitology, 55(12), 615-630. https://doi.org/https://doi.org/10.1016/j.ijpara.2025.05.002

Original images by Ruben Schols and Arnaud Henrard, Royal Museum for Central Africa, Belgium, modified and reproduced with permission (creativecommons.org/licenses/by/2.0/).

International Journal for Parasitology continued

IJP

INTERNATIONAL JOURNAL FOR PARASITOLOGY



November 2025 (55:13)

Story behind cover

Can migratory ungulates change local parasite abundance? Turns out, yes.

New research led by Houssein S. Kimaro shows that migrating wildebeest can alter parasite exposure in other ungulate species in Serengeti National Park-Tanzania. The effect depends on how many animals pass through—and how long they stay. Migration can amplify or dilute parasite loads across ecosystems. Nature's complexity never ceases to amaze.

Kimaro, H.S., McLntyre, J., Ezenwa, V.O., Holdo, R.M., Donaldson, J., Hopcraft, J.G.C., Morrison, T.A., 2025. Disentangling transport and trophic effects of animal movement on environmental parasite abundance. Int. J. Parasitol., 55, 673-682. doi: https://doi.org/10.1016/j.ijpara.2025.08.014

Original image courtesy of Jason Donaldson, Duke University, USA and Houssein Samwel Kimaro, University of Glasgow, UK

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https://www.sciencedirect.com/journal/international-journal-for-parasitology-parasites-and-wildlife

Editor: R.C. Andrew Thompson

Facebook: www.facebook.com/IJPPAW/

Please enjoy interviews from ASP members about their recent IJPPAW publications.

Melanie R. Wells, Scott Carver and Michelle Power, recently published "Survey of haemoprotozoa and *Toxoplasma gondii* in little penguins in Lutruwita/Tasmania, Australia" and we interviewed Melanie and Michelle about this important research.

1. Please tell us about your latest publication in relation to parasitism and potential health risks to penguin populations?

We wanted to survey little penguins in Lutruwita (Tasmania) for the presence of blood parasites and explore for exposure to *Toxoplasma gondii,* using light microscopy, nested PCR and modified agglutination tests. Not only does the island state represent the population strong hold for this species, but also the southernmost extent of their range in Australia. Our warming climate is thought to be facilitating range expansion of haemoprotozoan vector species e.g. ticks or mosquitoes to new geographical areas. We know that little penguins on the Australian mainland are susceptible to *Plasmodium* and *Haemoproteus* infections which can cause mortality. These parasites have not yet been detected in penguins from Lutruwita, so we aimed to conduct surveillance for them. Surveillance from over a decade ago described asymptomatic infections of *Babesia* sp. in little penguins around southeastern Australia, so we wanted to build on that. Finally, as penguins can breed in heavily urbanised areas

(fun fact: little penguin colonies can be found within a couple of kilometres of every southern Australian coastal capital city!)



Image of little penguin in Lutruwita (Tasmania) Island copyright Melanie Wells 2026

we aimed to test for exposure to *Toxoplasma gondii,* an apicomplexan parasite spread through the excretion of infectious oocysts from cat faeces. We know that toxoplasmosis in little penguins in Western Australia was the likely cause of mortality (Kym Campbell and Belinda Cannell) so we wanted to screen wild little penguins for exposure, given the proximity of some colonies to urban run-off in Lutruwita.

We detected suspect intraerythrocytic inclusions in 25% of blood smears assessed, but our morphological and molecular testing confirmed *Babesia* sp. infection in 2.4% of penguins (likely *B. peircei)*. We did not detect any *Haemoproteus sp., Leucocytozoon sp., or Plasmodium sp*. We detected antibodies for *T. gondii* in 2.5% of penguins (3/122), though only one sample (0.8%) was considered seropositive (titre ≤ 1:64).

Little penguins around Australia are currently facing a multitude of threatening processes, from fox, dog and cat predation to marine heat wave events, to habitat loss, and disease. Understanding the mechanisms behind these processes including parasite epidemiology is critical to gaining a more holistic picture of what little penguins are up against. This fundamental knowledge will contribute to conservation management and outcomes for penguins.

2. What is the significance of the findings of *Babesia* sp. infection confirmed in 2.4 % of little penguins,

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Image of little penguin in Lutruwita (Tasmania) Island copyright Jaslyn Allnut 2026

Babesia sp. related to previously reported species from AUS and NZ and Antibodies against *T. gondii* detected in 2.5 % of penguins?

Interestingly we reported very similar *Babesia* prevalence in little penguins from lutruwita as a previous survey by Ralph Vanstreels over a decade ago, which reported infection in 2.8% of penguins which suggests prevalence has remained stable, though long-term surveillance should be conducted to better understand disease processes. *Babesia* has been shown to be pathogenic in other seabirds like king penguins and cape cormorants, but we know very little about sublethal health effects or even wider prevalence in penguin species across New Zealand and the sub-Antarctic islands, including Macquarie Island, a Tasmanian Nature Reserve.

We detected antibodies to *T. gondii* in 2.5% of penguins, however only one sample was seropositive. This very low prevalence detected was likely a result of sampling blood from wild, free-living apparently healthy penguins. From what we know toxoplasmosis causes rapid mortality in little penguins; therefore, it is likely that true prevalence is higher and sampling of freshly deceased carcasses would be worthwhile to discern this.

3. What are some of the challenges associated with this kind of One Health research especially with regards to climate change?

We know that vector-borne diseases are heavily influenced by climate, and that populations on the edge of their range can be particularly vulnerable to change. Continued surveillance of vector-borne diseases is critical, particularly for species already under threat.

While toxoplasmosis exposure was low the proximity of little penguins to cities and agricultural lands creates connection to an array of pathogens in the landscape that may risk penguin health. *Toxoplasma gondii* infectious stage oocysts make their way into the marine environment from cats which risks exposure of vulnerable seabirds and marine mammals to this parasite.

Importantly, the introduction of H5 bird flu into Australia and accumulation of little penguin deaths from bird flu raises the question of the significance of co-infection with parasites and H5 associated mortality in penguins.

4. What is next for this research?

We would like to see greater parasite surveillance associated with little penguin conservation monitoring programs to better understand threatening processes. Penguins in captivity have a high susceptibility to

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haemoprotozoa associated mortality so we are currently investigating infecting species and transmission pathways in penguins in conservation settings in Australia. This data will also help understanding of haemoprotozoan interactions in penguins in Lutruwita and other areas of their range in Australia.

Read the publication:

Melanie R. Wells, Scott Carver, Ralph Eric Thijl Vanstreels, Annie Philips, Mary-Anne Lea, Michelle Power, "Survey of haemoprotozoa and *Toxoplasma gondii* in little penguins in Lutruwita/Tasmania, Australia", International Journal for Parasitology: Parasites and Wildlife, Volume 28, 2025, 101167, ISSN 2213-2244, https://doi.org/10.1016/j.ijppaw.2025.101167 (https://www.sciencedirect.com/science/article/pii/S2213224425001324)

Abstract: Parasitism poses potential health risks to penguin populations, yet the prevalence of protozoan parasites in wild free-living populations remains poorly understood. We conducted a survey of haemoprotozoa and *Toxoplasma gondii* in little penguins (Eudyptula minor) across 23 colonies in Lutruwita/Tasmania, Australia. Blood samples were screened for haemoprotozoa using light microscopy and nested PCR. Suspect intraerythrocytic inclusions were seen in the blood smears of 25 % of the penguins examined (62/247), but morphological and molecular evidence only confirmed *Babesia sp.* infection in 2.4 % of penguins (6/247). A single blood smear exhibited sufficient parasite life stages to allow morphological identification, and the morphology was consistent with *Babesia peircei*. Sequencing of the 18S rRNA gene of 4 samples confirmed a close relationship to *Babesia sp.* previously reported in little penguins in Lutruwita/Tasmania. A subset of samples (n = 50) with intraerythrocytic inclusions tested negative for *Haemoproteus sp., Leucocytozoon sp., and Plasmodium sp*. Antibodies against *T. gondii* were detected in 3/122 penguins, though only one sample (0.8 %) was considered seropositive (titre ≤1:64). This study provides a contemporary baseline for protozoan parasite occurrence in wild little penguins at the southernmost part of their Australian range. As changing climates are facilitating range expansion of vector species, studying the health of populations at the edge of their range is critical.



Images of little penguin in Lutruwita (Tasmania) Island top copyright Melanie Wells 2026 and middle image of Melanie with penguin copyright Jaslyn Allnut 2026

Renata Fernandes-Santos, Jessica Whinfield, Mariel Fulham, Gilad Bino, Tahneal Hawke, Rebecca Vaughan-Higgins, Larry Vogelnest, Kristin S. Warren and Michelle Power recently published "Targeted molecular screening for protozoan parasites in wild platypuses (*Ornithorhynchus anatinus*) and associated risk factors for infection" and we interviewed Renata, Jessica and Michelle about this important research.

1. Please tell us about your latest publication.

We wanted to understand which protozoan parasites occur in wild platypuses in New South Wales, and whether infection is associated with season, sex, age class, location or health parameters. Between 2021 and 2023, platypuses were captured, examined under field anaesthesia and sampled across five river catchments, giving 90 sampling events from 79 individuals. We used targeted PCR and DNA sequencing to screen blood samples for Theileria, Trypanosoma, *Plasmodium and Toxoplasma gondii,* and faecal samples for *Cryptosporidium and Giardia.*

Every blood sample was positive for Theileria ornithorhynchi, a host-specific haemoprotozoan, and 40% were positive for T*rypanosoma binneyi*. We

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Image of wild platypus copyright Jessica Whinfield, BSc DVM DVetMedSci candidate, Taronga Conservation Society Australia 2026

detected *T. gondii* in a single sub-adult male. *Plasmodium, Cryptosporidium and Giardia* were not found. Boosted regression tree modelling identified season as the main risk factor for *Tr. binneyi* infection, with prevalence highest in summer, and males were at somewhat greater risk than females. Season also influenced body condition and packed cell volume.

2. What is the significance of the first report of *Trypanosoma binneyi* in wild platypuses from NSW?

Trypanosoma binneyi had previously been reported only in platypuses from Victoria and Tasmania, so our findings extend the known distribution of this parasite. Baseline data like these are critical for understanding host–parasite relationships and assessing the effects of parasite occurrence on platypuses' health.

Both *Tr. binneyi and T. ornithorhynchi* are host-specific parasites that have evolved alongside the platypus, and there is growing recognition that such parasites deserve conservation consideration. Knowing where these parasites and their likely vectors occur is directly relevant to management decisions such as translocations.

Finally, the seasonal pattern gives us relevant information about transmission. Freshwater leeches and the platypus tick *Ixodes ornithorhynchi*

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have both been proposed as vectors. However, experienced field ecologists have observed a leech on only one of roughly 500 platypuses, while ticks are abundant year-round, which suggests ticks are the more likely vector. Seasonal physiological stress in males during the breeding season may also increase susceptibility. All animals were clinically healthy, and we found no significant association between infection and assessed health parameters, suggesting most infections are subclinical.

3. What are the challenges of this research, and is there much variation across Australia?

Platypuses are cryptic, semi-aquatic, semi-fossorial, largely nocturnal and solitary, so sampling them would be one of the many challenges.

Capture requires experienced field teams and a huge sampling effort best achieved through collaboration. You can see from the author list that many researchers with differing expertise were part of this research.

There are several laboratory challenges too. The parasite load maybe small so it is important that diagnostic tests will detect low parasite burden, hence why most PCRS are nested protocols. Working with faecal samples from wildlife that have not been used on established protocols can also be challenging but we found that the work for this project went very smoothly.

Regarding variation across the platypus's range, *T. ornithorhynchi* occurs from Queensland to Tasmania, but NSW isolates show minor genetic divergence from Tasmanian ones, probably reflecting the long isolation of Tasmanian platypus populations. *Trypanosoma binneyi* prevalence in our study (40%) was also considerably lower than the 92% reported in north-west Tasmania. Further studies across the range would be useful for a better understanding of the factors driving these differences.

4. What is next for this research?

Our results highlight the value of long-term, seasonally informed monitoring to better understand the ecological drivers of infection. Key questions include clarifying the role of ticks in *Tr. binneyi* transmission and quantifying parasite loads, particularly for Theileria, since high parasitaemia has been linked to haemolytic anaemia in juvenile platypuses. Our current understanding of the impact of these host-specific parasites on platypuses' health remains limited, and further investigation of these complex dynamics would be extremely helpful in clarifying disease risk, particularly amid environmental change and anthropogenic pressures.

The research has also opened up new opportunities to investigate other parasite species and One health risks for platypus in urban and agricultural areas. A lot to be discovered for this amazing elusive species.

Read the publication:

Renata Fernandes-Santos, Jessica Whinfield, Mariel Fulham, Gilad Bino, Tahneal Hawke, Rebecca Vaughan-Higgins, Larry Vogelnest, Kristin S. Warren, Michelle Power, "Targeted molecular screening for protozoan parasites in wild platypuses (*Ornithorhynchus anatinus*) and associated risk factors for infection", International Journal for Parasitology: Parasites and Wildlife, Volume 28, 2025, 101172, ISSN 2213-2244, https://doi.org/10.1016/j.ijppaw.2025.101172 (https://www.sciencedirect.com/science/article/pii/S2213224425001373)

Abstract: The platypus (*Ornithorhynchus anatinus*) is a unique monotreme endemic to eastern Australia, yet little is known about the prevalence and impact of protozoan infections in wild populations. This study investigated the occurrence of protozoan parasites and associated health parameters in wild platypuses from New South Wales (NSW), Australia, with a focus on seasonal variation and demographic risk factors. A total of 90 sampling events (79 individuals and 11 recaptures) yielded 72 blood and 81 faecal samples for parasitological screening through targeted molecular techniques. *Theileria ornithorhynchi* was detected in 100 % of blood samples (95 % CI: 95.01–100), confirming its widespread distribution and high prevalence in NSW platypuses. Trypanosoma spp. were identified in 40.3 % of blood samples (95 % CI: 28.88–52.50), and sequencing confirmed the presence of *Trypanosoma binneyi*, reported here for the first time in NSW. *Toxoplasma gondii* was detected in one sub-adult male (1.39 %, 95 % CI: 0.04–7.50). No blood samples tested positive for *Plasmodium spp*. (0 %, 95 % CI: 0–4.99). In addition, all faecal samples tested negative for *Cryptosporidium spp.* and *Giardia sp.* (0 %, 95 % CI: 0–4.45). Boosted Regression Tree (BRT) analysis identified season as

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the primary risk factor for *Tr. binneyi* infection (RI 89.5 %), with higher prevalence in summer. Males were also at increased risk (RI 10.5 %), while age class and location (river catchment) had no measurable influence. Season also significantly affected physiological parameters, including tail volume index (TVI) and packed cell volume (PCV). These findings expand the known distribution of protozoan parasites and provide new insights into the seasonal dynamics of parasitic infections in wild platypuses. This study contributes to the understanding of platypus health ecology and highlights the importance of long-term, seasonally informed monitoring programs.

Diane Barton and Shokoofeh Shamsi recently published "How much do we know about the parasites of great white sharks (*Carcharodon carcharias*) and why they matter?" and we interviewed them about this important research.

1. Please tell us about your latest publication consolidating current knowledge of parasites infecting the great white shark and exploring their potential ecological and physiological impacts.

Great white sharks are among the most intensively studied and recognised marine predators in the world, yet surprisingly little attention has been given to their parasites. That contrast was really what prompted this review.

We brought together published literature as well as records held in museum collections and identified 116 parasite records from great white sharks. Most belonged to two major groups, cestodes, or tapeworms, and copepods and much of the existing research was primarily taxonomic.

What interested us was not simply asking, "What parasites have been reported from great white sharks?", but taking the next step and asking, "What might these parasites mean for the shark?" Parasites can potentially influence host health, energy allocation, behaviour, feeding ecology and interactions with other species. For an apex predator such as the great white shark, those effects could have consequences that extend well beyond an individual animal.

One of the main messages from the paper is therefore how much we still do not know.

2. Why is it important to integrate parasitological research into ecological and conservation frameworks?

Because parasites do not exist in isolation from the environment, and neither do their hosts. One of the things we have become increasingly interested in is the connection between what happens on land and what happens in our oceans.

Rainfall and runoff, for example, can carry pollutants, microorganisms and parasite stages into rivers, estuaries and coastal waters. At the same time, they can alter salinity, visibility, oxygen levels and other environmental conditions experienced by marine animals. These pressures may influence host health, behaviour, feeding relationships and ultimately ecosystem function.

Toxoplasma gondii is a good example. Its environmentally resistant stages originate on land but can enter aquatic systems and become incorporated into marine food webs. It has been detected in a range of marine animals, yet it has not been reported from sharks. Importantly, that does not necessarily mean sharks are unaffected; it reflects how rarely sharks have been investigated from this perspective.

This is why we think parasitology needs to sit alongside movement ecology, genetics, physiology and conservation biology rather than being treated as a separate discipline. If we study where an animal moves and what it eats but overlook its parasites, pathogens and environmental exposures, we may be missing part of the explanation for the patterns we observe.

For an iconic and protected apex predator such as the great white shark, bringing these disciplines together could give us a much more complete understanding of health, behaviour and ecosystem interactions, and ultimately help us make better-informed conservation decisions.

3. Should parasites be included as species requiring surveillance and potential protection?

We think parasites certainly deserve much greater consideration in biodiversity surveillance and conservation.

That does not necessarily mean that every parasite should automatically become a formally protected species. However, parasites themselves form an enormous and often poorly documented component of biodiversity. Some are highly host-specific, so when a host becomes threatened, its unique parasites may also disappear, sometimes without us

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ever knowing that they existed.

At the same time, surveillance is important because changes in parasite populations can tell us something about changes in hosts, food webs and environmental conditions. The challenge is to move away from seeing all parasites simply as organisms that should be eliminated and instead recognise that, in natural ecosystems, many are normal and important components of biodiversity.

4. What are some of the challenges associated with this kind of wildlife parasitology research?

Access is probably the biggest challenge. Great white sharks are protected animals, and obviously researchers cannot collect animals specifically for parasitological examination. Opportunities to examine specimens are therefore rare and often depend on animals that become available opportunistically.

There are also limitations in the historical literature. Many parasite records were produced for taxonomic purposes, so we may know that a parasite was present but have little or no information about prevalence, infection intensity, pathology or effects on the host.

Museum collections are extremely valuable in this respect because they preserve evidence that might otherwise be lost, but specimen preservation, historical documentation and the availability of suitable material can also limit what questions can be addressed.

Wildlife parasitology often requires us to be quite creative, making the most of rare specimens, existing collections and collaborations across disciplines.

5. What is next for this research?

The next step, in our view, is to move from asking simply "Which parasites occur in great white sharks?" to asking "What do these parasites tell us about the shark, its environment and the ecosystem?"

Great white sharks have been studied extensively in terms of movement, migration, feeding ecology and behaviour, but parasites and disease have received comparatively little attention. That creates some fascinating opportunities.

One area we are particularly interested in is the land–freshwater–marine connection. Parasites and other microorganisms originating on land can move through catchments into estuaries and oceans and become incorporated into marine food webs. *Toxoplasma gondii* is one example. It has not yet been reported in sharks, and at present we simply do not know whether great white sharks are exposed to it. That is a research gap rather than evidence of absence.

More broadly, we would like to see parasitology integrated with shark ecology, veterinary pathology, environmental health and contaminant research. Parasites may potentially tell us about trophic interactions, movements and environmental exposure, while pathological investigation can help determine whether particular infections actually affect shark health.

Ultimately, we think the future lies in multidisciplinary and One Health approaches. What happens upstream does not necessarily stay upstream, and understanding the health of marine predators requires us to consider the whole connected system — land, freshwater, ocean, prey, parasites and people.

Read the publication:

Shokoofeh Shamsi, Diane P. Barton, "How much do we know about the parasites of great white sharks (Carcharodon carcharias) and why they matter?", International Journal for Parasitology: Parasites and Wildlife, Volume 28, 2025, 101160, ISSN 2213-2244, https://doi.org/10.1016/j.ijppaw.2025.101160 (https://www.sciencedirect.com/science/article/pii/S2213224425001257)

Abstract: There is growing recognition that excluding parasites from ecological and behavioural studies is a significant oversight, given their crucial roles in host health, energy allocation, and ecosystem function. Yet, the parasitic fauna of the great white shark (*Carcharodon carcharias*), a globally distributed apex predator, remains poorly understood. This review consolidates current knowledge of parasites infecting the great white shark and explores their potential ecological and physiological impacts. A synthesis of published literature and selected museum records revealed 116 parasite records, predominantly cestodes and copepods, with almost all studies being taxonomic in focus. Cestodes, known for their high reproductive output and metabolic demands, may influence growth, reproduction, and energy allocation, in their host, including great white sharks. Additionally, given that great white sharks acquire cestodes via prey infected with larval or infectious stages, parasite-induced changes in prey behaviour or vulnerability could bias dietary studies, an aspect largely overlooked in great white shark trophic ecology. Copepods, another frequently reported group, are known

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to cause tissue damage, respiratory inefficiency, and erratic swimming in fish, often requiring veterinary intervention in aquaculture. In sharks, behaviours such as breaching and tail-slapping have been speculatively linked to parasite removal, yet these assumptions overlook copepod biology and attachment mechanisms. Unsubstantiated interpretations risk perpetuating misconceptions and may hinder integration of parasitology into shark conservation strategies. This review also highlights critical knowledge gaps. For instance, several prey species consumed by great white sharks are known intermediate hosts of *Toxoplasma gondii*, a parasite capable of altering host behaviour and transmitting between intermediate hosts. Although unprovoked aggression has occasionally been reported in sharks, there are currently no data on the presence or potential effects of *T. gondii* in these apex predators as a potential intermediate/paratenic host. Clarifying such potential associations, alongside neglected areas such as embryonic infections (e.g., trebiid copepods), remains an important direction for future research. By identifying these critical knowledge gaps, we advocate for the integration of parasitological research into ecological and conservation frameworks to better understand apex predator health and ensure marine biodiversity protection.



Image of Leadbeater's possum being examined copyright Katherine Adriaanse 2026

Katherine Adriaanse, Robin Gasser and Anson Koehler, recently published "Novel apicomplexan in the critically endangered Leadbeater's possum, *Gymnobelideus leadbeateri*", and we interviewed Katherine Adriaanse about this important research.

1. Please tell us about your latest publication where a novel haemoparasite was identified in critically endangered Leadbeater's possums ?

Leadbeater's possums are a critically endangered species with a very restricted distribution in Victoria. The population is subject to multiple conservation efforts, including captive breeding as well as 'ranching' which involves bringing possums in from the wild short-term to increase survival during high-risk periods. As part of a disease outbreak investigation in the captive population, we identified

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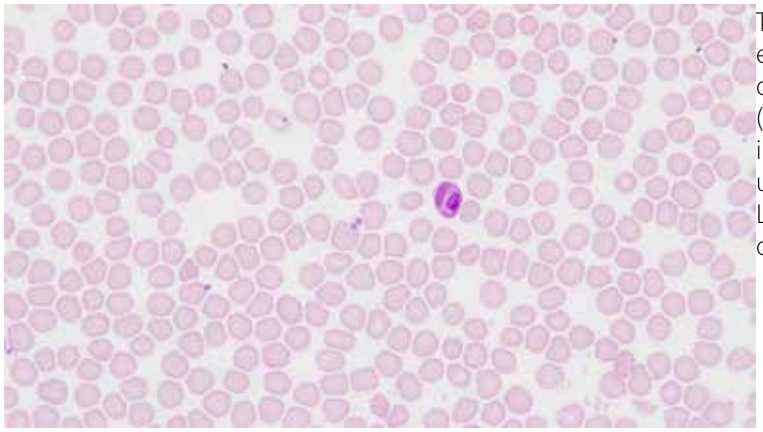
a novel species of haemoparasite in blood smears from the possums. In this case, the parasite did not appear to be contributing to the outbreak. A previous publication had reported death in a single Leadbeater's possum due to a haemoparasite infection, suspected to be *Plasmodium*. However, as we discuss in the paper, we suspect that case was also due to the novel apicomplexan we identified. **Although the clinical significance of the parasite remains unclear, it constitutes a potential disease risk which needs to be considered in ongoing conservation activities.** In addition, this novel apicomplexan is also likely to be critically endangered and will likely be lost if the Leadbeater's possum becomes extinct.

2. What is the significance of finding the parasite was genetically related to apicomplexans found in other marsupials?

Our findings supported a genetically cohesive taxon with minimal divergence across its geographic range, which is consistent with an endemic parasite well adapted to its host. If this is true, we would expect the parasite to be related to parasites infecting other marsupial hosts, having co-evolved together. So the story fits. In these relatively stable host-parasite systems, we don't usually expect population level disease impacts. However, when the population is very small (i.e. critically endangered), and subjected to multiple concurrent pressures, parasites such as this apicomplexan can pose a risk to species survival.

3. What are some of the challenges associated with this kind of wildlife parasitology research?

This investigation was particularly challenging as we were dealing with sick and dying critically endangered animals - trying to get answers as quickly as possible so we could treat other affected animals if needed.





Leadbeater's possums are very small (<200g) so it can also be challenging to collect the samples needed for investigations. In this case, we weren't able to go out and collect samples from the wild possums - they are very small populations, and the sampling would cause significant stress on the animals. This means we don't really understand what role this parasite plays in the wild yet.

4. What is next for this research?

The Leadbeater's possum population remains critically endangered and is in rapid decline. Any negative impact on individual health, survival, or reproductive fitness (however small it might be) is significant in a population in such a critical state. We will continue to try and understand the significance of this new parasite in the Leadbeater's possum and what impact it may be having on population decline.

Images (above) Leadbeater's possum being examined and (right) a blood smear showing the haemoparasite both images copyright Katherine Adriaanse 2026.

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A thicklip wrasse Hemigymnus melapterus considers its next mouthful of sand. These common and unassuming wrasses feature infrequently in the nightmares of small reef fishes, and so are unlikely definitive hosts for the Cryptogonimidae, which always require fish intermediate hosts. Image copyright Helen Armstrong, 2026

Read the publication:

Katherine Adriaanse, Robin B. Gasser, Anson V. Koehler, "Novel apicomplexan in the critically endangered Leadbeater's possum, *Gymnobelideus leadbeateri",* International Journal for Parasitology: Parasites and Wildlife, Volume 29, 2026, 101203, ISSN 2213-2244, https://doi.org/10.1016/j.ijppaw.2026.101203 (https://www.sciencedirect.com/science/article/pii/S2213224426000180)

Abstract: An unknown haemoparasite was detected on blood smears from two wild Leadbeater's possums brought into captivity for the purpose of joining the conservation breeding program. The parasite was identified as a novel apicomplexan using molecular techniques. Phylogenetic analyses grouped this parasite with other apicomplexans identified from Australian marsupials. Opportunistic and retrospective testing (PCR on blood or tissue and microscopic examination of blood smears) was undertaken on a total of 31 captive and wild individuals. Haemoparasites were detected in 44.4 % (95 % confidence interval [CI] 25.5–64.8) of blood smears and in 83.3 % (95 % CI 58.6–96.4) of blood and tissue samples tested by PCR. Duration in captivity at the time of testing was statistically significant, with decreasing odds of being PCR positive (OR = 0.95, 95 % CI 0.90–0.99; p = 0.043) and blood-smear positive (OR = 0.83, 95 % CI 0.69–0.99; p = 0.041) with increasing time (months) in captivity. A subset of animals that died was submitted for necropsy, but there was no histologic evidence of disease attributable to the haemoparasite identified. Given its apparent high prevalence in the population of Leadbeater's possum, without evidence of significant disease, this parasite is presumed to be endemic in this host species.

Helen Armstrong, Thomas Cribb, Scott Cutmore, Salvador Zarco-Perello, and Storm Martin recently published "*Lobosorchis labri n.* sp. (Trematoda: Cryptogonimidae): a host switch from snappers (Lutjanidae) to wrasses (Labridae),"

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and we interviewed Helen about this important research.

1. Please tell us about your latest publication researching marine life and parasites on at Ningaloo Reef, Western Australia.

We reported on new biodiversity in *Lobosorchis,* a small genus in one of the largest digenean families, the Cryptogonimidae. *Lobosorchis* previously comprised two species from tropical snappers (Lutjanidae), which are the predominant host group for marine cryptogonimids. We described a new species of Lobosorchis in tropical snappers on the Great Barrier Reef, but also a distinct new species from Ningaloo Reef in the thicklip wrasses *Hemigymnus fasciatus* and *Hemigymnus melapterus* (Labridae). Wrasses are among the largest groups of coral reef fishes, and this is the only known cryptogonimid with a wrasse definitive host. Beyond taxonomy, our manuscript extends this discovery to explore concepts in the theory of parasite host switching, as well as biogeographic patterns for the genus and ecological understanding of the host fishes.



Helen Armstrong (right) and the team search the morning's catch for parasites at Murdoch University's Coral Bay Research Station adjacent to Ningaloo Reef.

2. What is the significance of proposing the first cryptogonimid trematode with sexual adult parasitic in wrasses?

The new species demonstrates a host switch out of snappers into wrasses, an ecologically unlikely and phylogenetically dissimilar group. Detection of the new species also led us to discover that thicklip wrasses are substantially piscivorous. The Cryptogonimidae apparently always require fish intermediate hosts. They have remarkable concentration of richness and diversity in the tropical snappers, which are among the dominant groups of piscivorous fishes on coral reefs. Wrasses are an even larger group than snappers, but are overwhelmingly invertivores. The thicklip wrasses comprise two species widespread in the tropical Indo-West Pacific, plus a third species endemic to the Red Sea. They are larger than most other wrasses, and exhibit a distinctive winnowing foraging behaviour: they suction mouthfuls of sand and gravel, then swim upwards sifting prey and streaming sand from their gills. Previous diet inferences for these fishes, mainly observational, concluded they were entirely invertivores. When we discovered cryptogonimids at substantial prevalence (63%) we knew they must be taking fishes and so started searching and preserving gut content during our parasitological surveys. We found fish scales and bones in 42% of examined guts at Ningaloo Reef.

We were also surprised that this species had not been discovered previously. Thicklip wrasses are common and widespread fishes. Following our discovery at Ningaloo Reef, we targeted these fishes on the Great Barrier Reef, and re-examined previous dissection records. In total, 98 thick-lipped wrasse have been examined from Queensland, without any cryptogonimid infection, strongly suggesting the new species does not occur there, and therefore that the host switch likely occurred in the Indian Ocean.

3. Is it exciting to propose two new *Lobosorchis* spp.?

Proposing new species is

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Sleek, alert and, well, snappy! Tropical snappers like this Spanish flag are among the dominant piscivores on coral reefs, and are the predominant definitive host group for the Cryptogonimidae Image copyright Helen Armstrong, 2026.

always exciting, but not all species are equal—finding the first cryptogonimid from a wrasse is certainly a little more exciting than finding another cryptogonimid in another tropical snapper!

Frustratingly, in this analysis we detected unique genotypes that almost certainly represent additional undescribed species of *Lobosorchis* (all known species are represented by comparable sequence data). However, we had insufficient specimens to properly study or formally describe these specimens, so the hunt continues.

4. How important is a host switch of a trematode from snappers to wrasses?

Host switches are rare, but they apparently happen all the time at evolutionary scales. Our discovery presents an example that attests to this rarity. Colonisation of a new host group requires sufficient ecological encounters with infective stages, and for sufficient individuals to beat the host physiological barrier. Cryptogonimid metacercariae are encysted in various smaller fishes, and so continuously encounter multiple groups of piscivorous fishes with high frequency. Many such dominant and diverse groups well-represented on coral reefs, for example morays, barracudas, emperors, trevallies and groupers, let alone the sharks or sea birds, are not known hosts to any cryptogonimids—the physiological barrier has never been breached. Indeed, snappers and wrasses are not even particularly closely related, with phylogeny serving as an indication of physiological dissimilarity. In this context, the host switch inferred

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for this species of Lobosorchis is impressive.

5. What are some of the challenges associated with this evolutionary and biogeographical narratives research of parasites and their hosts?

Our complete lack of calibrated molecular clocks for dating digenean phylogenetic reconstructions is among the most prohibitive challenges in exploring evolutionary histories. We speculate that the new species in wrasses likely represents a recent host-switch from snappers, because of genetic and morphological similarity to its snapper-infecting congeners, but we don't really have any good yardstick for what we mean by "recent".

6. What is next for this research?

Find more new taxa! Taxonomy for marine digeneans in the Indian Ocean lags significantly behind effort from the Pacific and Atlantic, and that includes at Ningaloo Reef in Western Australia relative to the Great Barrier Reef off Queensland. We hope that sampling for marine trematodes in Western Australia will be a long-tern endeavour. And in our modern molecular era, this means generating genetic sequence data to enable biogeographic inference from beta-diversity comparisons with fauna from eastern Australia as well as elsewhere around the Indo-Pacific.

Read the publication:

Helen Armstrong, Thomas H. Cribb, Scott C. Cutmore, Salvador Zarco-Perello, Storm B. Martin, "*Lobosorchis labri n.* sp. (Trematoda: Cryptogonimidae): a host switch from snappers (Lutjanidae) to wrasses (Labridae)", International Journal for Parasitology: Parasites and Wildlife, Volume 29, 2026, 101206, ISSN 2213-2244, https://doi.org/10.1016/j.ijppaw.2026.101206 (https://www.sciencedirect.com/science/article/pii/S2213224426000210)

Abstract: The first cryptogonimid trematode with adults parasitic in wrasses (Labriformes: Labridae) is proposed. *Lobosorchis labri n.* sp. was recovered at a substantial combined prevalence (63%, 15 of 24) from the thicklipped wrasses *Hemigymnus melapterus* (Bloch) and *H. fasciatus* (Bloch) at Ningaloo Reef, Western Australia. Definitive hosts for all other *Lobosorchis spp.* are exclusively tropical snappers, *Lutjanus* spp. (Lutjaniformes: Lutjanidae). Novel material for *Lobosorchis spp.* collected from snappers is also reported, including for *L. tibaldiae* Miller & Cribb, 2005 and *L. polygongylus* Miller et al., 2009, a new species *L. milleri n.* sp., and novel genetic data and host-locality combinations for what are interpreted as uncharacterised species, from Ningaloo Reef, the Great Barrier Reef off eastern Australia, French Polynesia, and Okinawa, Japan. *Lobosorchis labri* has evidently speciated following a host switch from snappers into wrasses. Based on comparison of genetic differences among *Lobosorchis* spp., this switch has occurred recently, in evolutionary terms, yet sufficiently distantly such that *L. labri* is now apparently specific for *Hemigymnus* spp. and no longer infects snappers; infections of *Lobosorchis* spp., but not *L. labri,* were detected in sympatric snappers at Ningaloo Reef. Cryptogonimids were not detected in our examinations of 98 individuals of *Hemigymnus* spp. on the Great Barrier Reef; *L. labri* seemingly does not occur there, and thus the host switch which gave rise to this species likely occurred somewhere in the Indian Ocean. Piscivory in *Hemigymnus* spp. is reported, implied by infection of cryptogonimids and confirmed via examination of gut contents.



Image of Leadbeater's possum being examined copyright Katherine Adriaanse 2026

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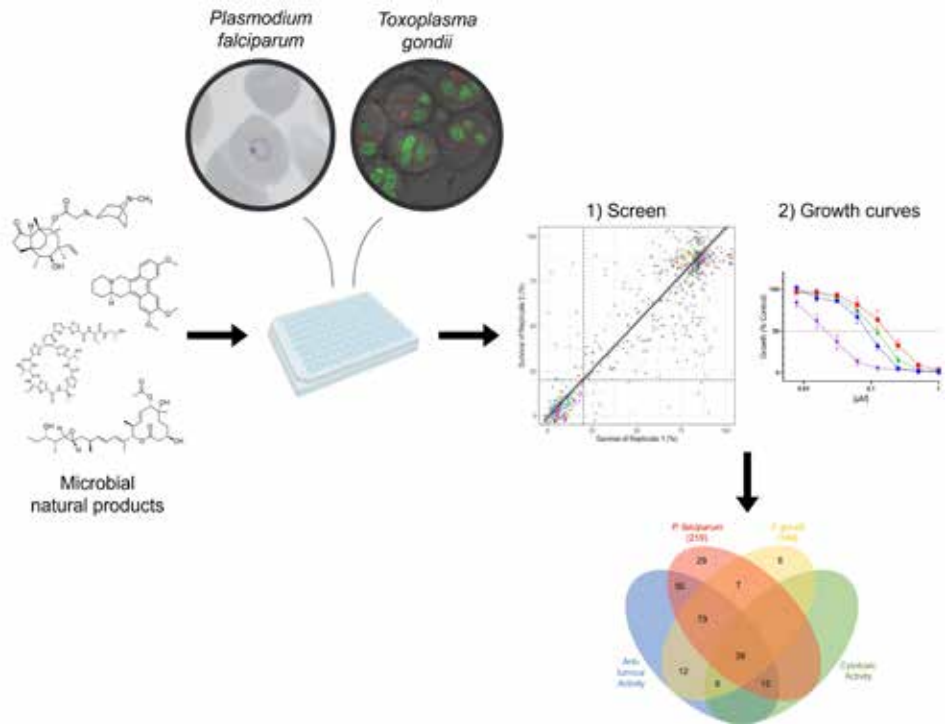
https://www.sciencedirect.com/journal/international-journal-for-parasitology-drugs-and-drug-resistance

Editors In Chief: Sarah Preston & Kevin Saliba

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Please enjoy interviews with ASP members about their IJPDDR publications.

Maria Gancheva and Danny Wilson recently published " Screening and hit evaluation of a microbial metabolite library against the pathogenic *Plasmodium falciparum* and *Toxoplasma gondii* parasites" and we interviewed Maria about this research:



Graphical Abstract Image courtesy Maria Gancheva and Danny Wilson https://www.sciencedirect.com/science/article/pii/S2211320725000296

1. Please tell us about your latest publication in relation to "Screening and hit evaluation of a microbial metabolite library against the pathogenic *Plasmodium falciparum* and *Toxoplasma gondii* parasites" and why it's important for these two apicomplexan parasites of global importance?

In this publication, we screened a library of 812 microbial metabolites against two globally important apicomplexan parasites, *Plasmodium falciparum,* the causative agent of the most severe form of malaria, and *Toxoplasma gondii,* responsible for the widespread food- and water-borne disease toxoplasmosis. This library of compounds (BioAustralis Discovery Plates Series I) contains known and rare microbial metabolites, with diverse biological activity. Our screen showed that 27% (219/812) and 18% (149/812) of compounds inhibited blood-stage P. falciparum and T. gondii tachyzoite growth by more than 80%, respectively. These compounds represented more than 50 different chemical classes. Using toxicity data against mammalian cells, we further triaged the compounds, and characterised the in vitro potency and selectivity against the parasites for a selection of compounds with potentially interesting or unknown mechanisms of action.

This work is important because both malaria and toxoplasmosis continue to present major global health challenges. However, current malaria treatment strategies are threatened by emerging and growing parasite drug resistance, whereas toxoplasmosis treatments are limited by poor efficacy and adverse side effects. Therefore, there is an urgent need to develop new drugs to target both parasites. Historically, many drugs, including anti-malarials, have been derived from natural products, and toxoplasmosis drugs have been repurposed from anti-malarials and antibiotics. Importantly, only a small percentage of the world's biodiversity has actually been explored for anti-microbial activity leaving a lot to be discovered. By evaluating a diverse library of microbial metabolites against both parasites, this study expands the pool of candidate compounds with potentially novel mechanisms of action that could overcome existing resistance. Importantly, it also identifies chemical scaffolds that may serve as valuable research tools for understanding parasite biology and as lead compounds for the development of next-generation anti-parasitic therapies. These findings strengthen the case for natural products as a rich and still promising source of new drugs to combat the significant issues

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presented by these apicomplexan pathogens.

2. What are some of the challenges associated with this kind of research?

Research focused on discovering new anti-parasitic compounds from natural product libraries faces several scientific and practical challenges. Natural products possess considerable chemical diversity, which can result in broad and complex biological activity. This diversity is advantageous because it provides opportunities to identify compounds with novel mechanisms of action, including compounds that may act against multiple parasite species or life-cycle stages. However, broad biological activity can make it challenging to identify compounds with sufficient parasite specificity. Ideally, candidate compounds should demonstrate selective activity against parasites while exhibiting minimal toxicity towards mammalian cells but also against non-target organisms such as bacteria. This selectivity is important for reducing potential off-target effects and avoiding unnecessary contribution to antimicrobial resistance.

The structural complexity presents an additional challenge. Where a compound needs improved properties, such as potency, selectivity or pharmacological properties, chemical modification, optimisation and synthesis strategies can be technically complicated with such large and intricate structures, potentially limiting their development. Many microorganisms are also difficult to culture and bioactive compounds can be difficult to isolate and purify in sufficient quantities, particularly when required for pre-clinical and clinical studies, and eventual large-scale production.

Despite these challenges, natural product libraries remain an important source of novel anti-parasitic drug candidates. Indeed, many naturally-derived compounds, including large and complex molecules, have successfully been developed into clinically important drugs (e.g. the anti-malarial artemisinin and the antibiotic erythromycin), demonstrating the significant potential of natural products for therapeutic discovery and development.

3. What is next for this research?

We are currently working on understanding the mechanism of action of several groups of potent compounds from this library, with the goal of identifying novel compounds that differ to drugs used in current treatment strategies for malaria and toxoplasmosis. Given their potency and selectivity for these parasites, with a potentially different or novel mechanism of action, we hope to subsequently investigate their activity in an in vivo rodent model.

Read the publication:

Maria R. Gancheva, Emma Y. Mao, Ornella Romeo, Daniel Vuong, Ryan O'Handley, Stephen W. Page, Ernest Lacey, Danny W. Wilson, "Screening and hit evaluation of a microbial metabolite library against the pathogenic *Plasmodium falciparum* and *Toxoplasma gondii* parasites," International Journal for Parasitology: Drugs and Drug Resistance, Volume 29, 2025, 100606, ISSN 2211-3207, https://doi.org/10.1016/j.ijpddr.2025.100606 (https://www.sciencedirect.com/science/article/pii/S2211320725000296)

Abstract: Frontline drug treatments for malaria are at risk of failing due to emerging resistance, meanwhile drugs used to treat toxoplasmosis have suboptimal efficacy and safety. As demonstrated by the success of clinically used antiparasitic drugs, the diverse structural complexity and biological activity of natural products holds great potential for drug discovery and development, to address the need for new compounds with novel mechanisms. Here we screened the BioAustralis Discovery Plates Series I library, a collection of 812 microbial natural product compounds including rare microbial metabolites, against *Plasmodium falciparum* erythrocytic stage and *Toxoplasma gondii* tachyzoite parasites. We identified 219 compounds that inhibited P. falciparum growth by at least 80 % at a concentration of 2 µg/mL (1–10 µM for >90 % of compounds), whilst 149 compounds demonstrated equivalent activity against *T. gondii*. The active compounds were assigned based on chemical structure to more than 50 compound classes. After triaging active compounds for those with low mammalian cytotoxicity, we defined the in vitro half maximal inhibitory concentration (IC50) of a selection of compounds against the parasites, identifying four compound groups with activity in the low nanomolar range. The macrocyclic lactone pladienolide B and cryptopleurine were found to be very potent against the parasites but also mammalian cells, warranting further structure-activity relationship investigation. Two groups, the monocyclic thiazole peptides, including micrococcin P1 and the thiocillins, and the pleuromutilins, exhibited both low antiparasitic IC50 and low cytotoxicity, highlighting their potential for further analysis. This study defines the activity of the BioAustralis Discovery Plates Series I against two apicomplexan parasites of significant global importance, providing potential new tools to study parasite biology and possible starting points for novel antiparasitic development.

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Images copyright Nichola Calvani, 2026

Nichola Calvani recently published "Challenges in applying W.A.A.V.P. criteria to diagnosing triclabendazole resistance in *Fasciola hepatica*, an example from the Southern Tablelands of New South Wales, Australia" and we interviewed Nichola about this research:



1.Please tell us about your latest publication in relation to a diagnostic field investigation aligned with guidelines from the World Association for the Advancement of Veterinary Parasitology (W.A.A.V.P.) to evaluate the prevalence and susceptibility of *F. hepatica* on naturally infected sheep, cattle, and goat properties?

Nichola: I really enjoyed this project because it started with a question from industry. Roger Willoughby, who owns a rural supplies store in Gunning and is now a co-author on the paper, contacted us after local farmers became concerned about increasing liver fluke burdens and possible drug resistance. Rather than assuming resistance was the cause, he was keen to work with us to actually test it. We screened 20 farms and ultimately enrolled nine mobs from eight sheep, goat and cattle properties, involving almost 400 animals. We followed the W.A.A.V.P. guidelines as closely as possible and combined faecal egg counts, coproantigen ELISA and qPCR to assess infection and drug efficacy. We confirmed triclabendazole resistance on one sheep property and found evidence of reduced efficacy on others. One of the best parts was how engaged the farmers were. They were interested in why we needed control groups, why animals had to remain co-grazed and how the different diagnostic tests worked. It was also a fantastic opportunity for our placement, undergraduate, HDR and visiting international students to work directly with livestock producers and see the practical value of their parasitology research. We now hold regular producer information days in the area where we share our latest results, discuss parasite control and, importantly, hear what questions farmers want us to investigate next.



2. What is the significance of the First potential report of albendazole resistance in *F. hepatica* in goats?

Nichola: This was probably our most unexpected result. Triclabendazole was still highly effective in the goats, but albendazole efficacy was only 79%, making this, to our knowledge, the first potential report of albendazole-resistant *F. hepatica* in goats. Goats are difficult because there is only one class of anthelmintic (benzimidazoles) registered against liver fluke in goats in Australia and there is a lot of confusion around appropriate dose rates. In this trial we treated at 1.5 times the sheep dose, but the farmers had previously been dosing closer to the sheep rate. Goats metabolise many anthelmintics more rapidly than sheep, so repeated underdosing could have contributed to selection for reduced efficacy. We called it potential resistance because albendazole is mainly effective against adult fluke, so a controlled efficacy trial would still be needed to confirm it. It was reassuring, though, that triclabendazole remained effective in these very heavily infected animals.

3. What are some of the challenges associated with this kind of research?

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Nichola: Probably the biggest challenge was trying to follow the W.A.A.V.P. guidelines under real commercial farming conditions. They are important guidelines, but some requirements are quite aspirational when you are working with naturally infected animals on large Australian properties. We had nearly 400 animals in the investigation and only Chelsie and me doing the liver fluke faecal egg counts. That meant we simply could not individually screen every animal before allocating them to treatment groups. We therefore had to assume infection was reasonably evenly distributed, but once the Day 0 results came back, some mobs did not have enough infected animals in each group to meet the full inclusion criteria. There were also all the usual realities of fieldwork: large mobs to muster, animals missed at follow-up, worn ear tags, limited faecal sample volumes, poor weather and competing priorities on farm. One farmer even swapped the mob we were due to test at the last minute, and the replacement mob turned out to be uninfected! We also deliberately used diagnostic cut-offs that reflected what commercial laboratories use, because we wanted the study to represent what producers actually face. That exposed problems with false negatives by coproantigen ELISA and even mite eggs that could be mistaken for liver fluke eggs under routine microscopy. In the end, those limitations became one of the most useful parts of the paper, because they show how difficult resistance diagnosis can be under real production conditions.

4. What is next for this research?

Nichola: This project ended up being the first of several we have now conducted with producers in the Southern Tablelands, and most of the follow-up work has come directly from questions raised by farmers or things we noticed during fieldwork. During the resistance trial, for example, we were surprised by how many active liver fluke snails we were seeing in the middle of winter, despite very low temperatures. That led to a 12-month study looking at the seasonality, diversity and abundance of liver fluke intermediate hosts. Farmers then asked whether fencing off high-risk liver fluke areas was really worthwhile when kangaroos could jump the

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fences, so we began investigating the relative contribution of eastern grey kangaroos and sheep to pasture contamination with liver fluke eggs. More recently, after finding hydatid cysts in some kangaroos and hearing repeated concerns about deer moving between properties, we expanded the work into deer and broader parasite and pathogen surveillance. Local Land Services in Greater Sydney and the Southern Tablelands are now also helping by providing access to deer culled through existing pest-control programs.

What I like most is that the work keeps growing from real questions producers are asking. It has supported a lot of students, strengthened collaborations across universities, industry and government, and given us a really productive long-term relationship with farmers in the region.

Read the publication:

Chelsie Uthayakumar, Hayley Martinez DeCristi, Emily Kate Francis, Roger Alan Willoughby, Shannon Taylor, Nichola Eliza Davies Calvani, "Challenges in applying W.A.A.V.P. criteria to diagnosing triclabendazole resistance in *Fasciola hepatica*, an example from the Southern Tablelands of New South Wales, Australia", International Journal for Parasitology: Drugs and Drug Resistance, Volume 29, 2025, 100618, ISSN 2211-3207, https://doi.org/10.1016/j.ijpddr.2025.100618 (https://www.sciencedirect.com/science/article/pii/S2211320725000417)

Abstract: *Fasciola hepatica* (liver fluke) is a zoonotic parasite of global concern. In Australia, it is the 13th most important cause of economic loss in the sheep meat industry alone. Resistance to the frontline drug, triclabendazole (TCBZ), was first recorded in Australia in 1995 and has since emerged globally. In 2023, producers from the New South Wales (NSW) Southern Tablelands raised concerns over a reported 230% increase in liver fluke, which they suspected was due to drug resistance. To confirm or deny these suspicions, we co-designed a diagnostic field investigation aligned with guidelines from the World Association for the Advancement of Veterinary Parasitology (W.A.A.V.P.) to evaluate the prevalence and susceptibility of *F. hepatica* on naturally infected sheep, cattle, and goat properties. Nine mobs (seven sheep, one goat, one cattle) across eight farms were divided into three treatment groups (15 animals/group) and treated with either TCBZ, closantel/abamectin (CLOS/AVM, positive control – sheep), albendazole (ABZ, positive control – goats), or water (H2O; negative control). Prevalence was determined by sedimentation and faecal egg count (FEC), alongside a commercial coproantigen ELISA (cELISA) and in-house qPCR. Drug efficacy was assessed using faecal egg count reduction tests (FECRT) and coproantigen reduction tests (CRT). Four of the eight farms had a within-herd true prevalence >25%. TCBZ resistance was confirmed on one sheep property (86–89% efficacy). The goat property demonstrated susceptibility to TCBZ (97–98% efficacy), but reduced efficacy of ABZ (79%), representing the first potential report of ABZ resistance in *F. hepatica* infecting goats. Nemabiome sequencing of co-infecting gastrointestinal nematodes confirmed widespread benzimidazole resistance, underscoring the broader challenges faced by producers. Other potential causes of drug failure included climate variability, pseudo-parasites, and low cELISA diagnostic sensitivity. These results highlight the complexity of diagnosing and managing drug resistance in naturally infected populations and reinforce the need for *Fasciola*-specific W.A.A.V.P. guidelines.

Alexander Lam and Samantha Emery-Corbin recently published "Illuminating the druggability of the *Giardia duodenalis* kinome through reannotation and high-throughput screens" and we interviewed Alex about this research:

1. Please tell us about your latest publication in relation to *Giardia duodenalis* kinases, in particular the updated kinome reannotation and examination of the giardial core and specific sub-kinomes using novel bioinformatic tools?

Protein kinases regulate essential cellular processes in all cells, making these enzymes some of the most successful therapeutic targets in modern medicine. However in Giardia, like many parasites, studies on these proteins remain largely underexplored, and previous *Giardia* kinase research were conducted based on some assumptions which no longer hold true.

Improved genome assemblies as well as new, modern bioinformatic approaches represented a new opportunity for exploring the druggability of *Giardia* kinases. Here, we were able to interrogate previous kinome annotations with more depth and confidence, and provide an updated framework/proposed

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nomenclature for kinase families in this parasite. By doing so we believe this guides future research, highlighting both the parasite's minimal set of "core" kinases as well as an unusually expanded set of kinases which appear to be unique to *Giardia*, perhaps more aptly, the kinases formerly known as "Neks".

Further, as proof of concept and to assess whether these kinases could represent attractive drug targets, we performed a high-throughput screen of more than 400 kinase-targeting small molecule compounds. This work succeeded in identifying molecules with antigiardial activity as well as highlighting specific molecular scaffolds and kinase pathways which may represent high-priority avenues for developing new chemotherapeutics for *Giardia.*

2. What is the significance of the *Giardia*-specific Never-in-Mitosis-A related kinases (Neks)?

Homology-based inference to annotate proteins is comparable to the saying "if it walks and talks like a duck, it's probably a duck". In the *Giardia* kinome however, these "Nek" family of kinases are massively expanded, and with most being so evolutionarily divergent from other eukaryotic Neks, they are probably better described as a goose instead. We have thus termed this expanded family of Nek-related kinases "non-core protein kinases" or ncPKs, where a majority of these ncPKs appear to be "unique" to *Giardia* and have no close homology to any other kinases in any other organisms. Because when your duck looks this much like a goose, continuing to call it a duck may say more about the researcher than the kinase.

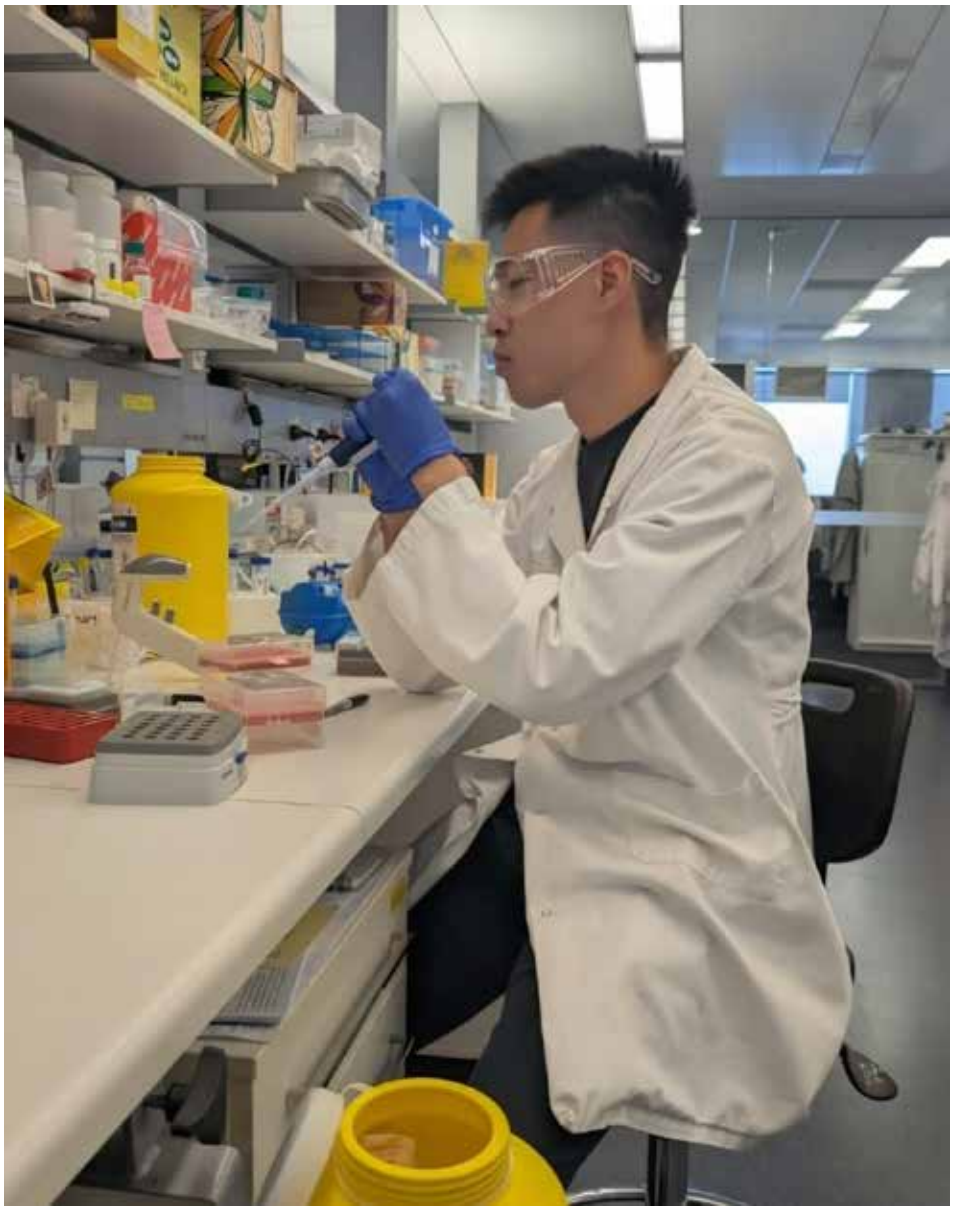
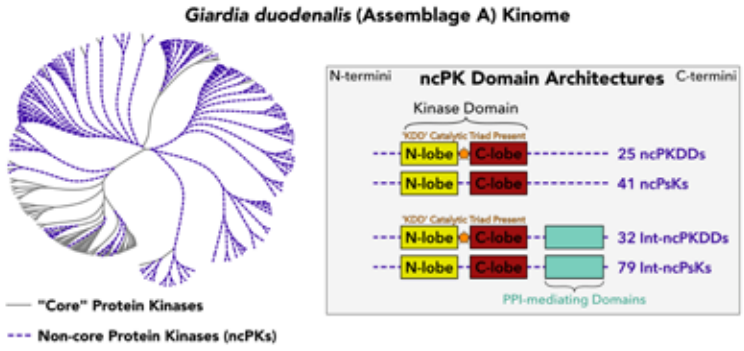


Image of Alexander Lam in the laboratory at WEHI

While these represent attractive *Giardia*-specific targets, currently, only a select few of these ncPKs have been examined for their functional roles within *Giardia*. However, they have been shown to be involved in a range of cellular processes ranging from mitosis, excystation, cytokinesis, and microtubule regulation; one of the current hypotheses in the field is the large expansion of ncPKs are correlated with the complex microtubule skeleton of the parasite, and act as scaffolding proteins as well

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While this work represents only a first, small step towards this, we also hope this updated kinome serves as a foundational resource for the wider research community to explore kinase biology in this parasite and, with luck, one of these unconventional geese may yet prove capable of producing the golden egg for antigiardial drug discovery.

Graphical abstract courtesy Alexander Lam https://www.sciencedirect.com/science/article/pii/S2211320725000429

as regulators in these complex mitotic and cytokinetic processes.

3. What are some of the challenges associated with this kind of research?

One of the challenges in this work is the inability to accurately predict protein functions based on homology alone. Most *Giardia* kinases (especially ncPKs) are evolutionarily divergent to other organisms that have been extensively studied, making structure- and sequence-based inferences of functions based on homology to other model organisms difficult, hence many "true" biological functions of these kinases remain unknown. Knowledge on protein function is essential in the modern era of drug discovery, after all, it is difficult to justify the development of therapeutics against a protein when its true biological function remains unknown.

Thus, best practices for elucidating *Giardia* kinase function should be done empirically, with functional genetics. However, experimentally validating the function of ~300 Giardia kinases is not trivial, as the binucleated and tetraploid nature of this parasite is an immediate roadblock to traditional functional genetic tools. In other words, before functional validation even begins, our proverbial goose is already somewhat stuffed.

4. What is next for this research?

The challenging next phase of this work is the deconvolution of the biological significance and functions of ncPK/Neks. For anti-parasitic drug discovery, it is required to identify which of these proteins are essential for parasite survival, proliferation and infectivity, followed by designing bespoke inhibitors to block these processes selectively. More specifically, finding potential protein substrates and regulators up/downstream of each individual ncPK/Nek would help understand where/how/when the parasite requires specific protein interactions to occur, and rational-targeting of these interactions might serve as starting points for the development of next-generation treatments.

Read the publication:

Alexander Y.F. Lam, Isabelle S. Lucet, Aaron R. Jex, Samantha J. Emery-Corbin, "Illuminating the druggability of the *Giardia duodenalis* kinome through reannotation and high-throughput screens", International Journal for Parasitology: Drugs and Drug Resistance, Volume 29, 2025, 100619, ISSN 2211-3207, https://doi.org/10.1016/j.ijpddr.2025.100619 (https://www.sciencedirect.com/science/article/pii/S2211320725000429)

Abstract: *Giardia duodenalis* (syn Giardia intestinalis, Giardia lamblia) is a neglected, microaerophilic gastrointestinal parasite reliant on broad spectrum anti-microaerophilic/-anaerobic nitroheterocyclic antibiotics (metronidazole) which have been in use for over 70 years. New drugs which avoid their predecessor's shortfalls of toxic and adverse effects, as well as circumvent its increasing treatment failure, are urgently required to lower global rates of up to 200 million symptomatic cases annually. Kinases are essential regulatory enzymes that primarily catalyse the phosphorylation post-translational modification involved in dynamic cellular processes. Kinases

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are well-validated and attractive drug targets, with many kinase inhibitors demonstrating great success in the clinic as anticancer therapeutics. In *G. duodenalis*, its intriguing set of minimal "core" protein kinases and the highly expanded *Giardia*-specific Never-in-Mitosis-A related kinases (Neks) emerge as a novel druggable space. We propose this kinome as an understudied and underutilised space to explore novel antigiardial targets. Intriguingly, despite over 15 years of advances in kinase biology and new annotation tools, there are limited functional evidence on the existence of 'Neks' in *G. duodenalis*. To incentivise new efforts, we provide an updated kinome reannotation and examination of the giardial core and specific sub-kinomes using novel bioinformatic tools, suggesting a nomenclature and providing insights in a drug-discovery context. Lastly, we have conducted a high-throughput screening of 430 compounds, covering 53 kinase targets and 51 chemical scaffolds, identifying 83/430 antigiardial kinase inhibitors of which 33 true positives could be validated in a subset subjected to drug-susceptibility testing, highlighting intriguing spaces for further development and molecular probes to further explore kinase regulatory pathways in this parasite.



Connecting with one of the horse participants during a field visit in New South Wales. (Image copyright Elysia Ling, 2026)

Ghazanfar Abbas and Abdul Jabbar recently published "Recent advances in intestinal helminth parasites of horses in the Asia-Pacific region: Current trends, challenges and future directions" and we interviewed Ghaz about this publication.

1. Please tell us about your latest publication on equine intestinal helminths in the Asia-Pacific region and Australia's first national equine parasite-control guidelines.

Our recent review synthesises 25 years of research on the main intestinal worms of horses across the Asia-Pacific, including small strongyles (cyathostomins), *Parascaris spp.*, *Strongyloides westeri*, and tapeworms. Most of the available evidence comes from Australia and New Zealand, highlighting important knowledge gaps elsewhere in the region. A key message is that dewormer resistance is already affecting parasite control. In Australia, reduced efficacy has been reported in cyathostomins and *Parascaris* spp. against commonly used treatments, including ivermectin and moxidectin, and parasite eggs may reappear sooner after treatment than they did historically.

This evidence also helped inform

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An inquisitive horse poses for the camera during field sampling in Victoria. (Image copyright Ghazanfar Abbas, 2026)

Australia's first national guidelines for equine internal parasite management. The guidelines move away from routine calendar-based deworming and instead recommend monitoring with faecal egg counts, checking whether treatments still work, quarantining new horses and using pasture-management measures. The aim is not to eliminate every parasite, but to prevent disease while preserving the effectiveness of the limited treatments available.

2. What is the significance of using surveillance and integrated, farm-specific strategies for parasite control?

Surveillance helps us treat the right horse, with the right product and at the right time. Faecal egg counts show which horses are shedding the most parasite eggs, while faecal egg count reduction tests show whether a dewormer is still effective. This can reduce unnecessary treatments and help slow the development of resistance.

Control also needs to be tailored to each property because risk varies with age, climate, stocking density, pasture management and horse movement. Non-drug measures such as manure removal, pasture spelling, appropriate stocking rates, quarantine and, where suitable, biological control can further reduce pasture contamination. In short, the best programs combine monitoring, targeted treatment and practical farm management.

3. What are some of the challenges associated with researching the impact of climate on parasite-transmission dynamics?

Climate affects several stages of the parasite life cycle at once. Temperature, rainfall, humidity and soil moisture influence how eggs hatch, larvae survive and infective stages reach grazing horses, but these factors interact. For example, warm temperature may speed larval development while very dry conditions reduce survival.

Australia adds further complexity because climates range from tropical and humid to Mediterranean and cool temperate, and many horses graze year-round. Farm management can also mask or amplify climate effects.

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Routine faecal egg counts are useful, but they do not show the exact worm burden or identify individual strongyle species. Long-term studies that combine weather, farm-management information, faecal egg counts and DNA-based species identification will be important for developing more climate-informed parasite-control advice.

4. What is next for this research?

The next step is to find out how widely the national guidelines are being used and what are the barriers that prevent veterinarians and horse owners from adopting surveillance-based control. Longer-term studies across different Australian climates are also needed to track parasite transmission, pasture contamination and treatment effectiveness.

Continued monitoring for drug resistance is a major priority, including both single-active and combination products. We also need better information on less-studied parasites such as the tapeworm *Anoplocephala perfoliata and Strongyloides westeri.* Ultimately, a coordinated national surveillance database could help identify emerging treatment failures and regional hotspots earlier, supporting more sustainable parasite control and better horse health.

Read the article:

Ghazanfar Abbas, Martin K. Nielsen, Charles E-Hage, Abdul Ghafar, Ian Beveridge, Jenni Bauquier, Anne Beasley, Edwina J.A. Wilkes, Peter Carrigan, Lucy Cudmore, Caroline Jacobson, Kristopher J. Hughes, Abdul Jabbar, "Recent advances in intestinal helminth parasites of horses in the Asia-Pacific region: Current trends, challenges and future directions", International Journal for Parasitology: Drugs and Drug Resistance, Volume 29, 2025, 100622, ISSN 2211-3207, https://doi.org/10.1016/j.ijpddr.2025.100622 (https://www.sciencedirect.com/science/article/pii/S2211320725000454)



Young horses on a Victorian property visited during field sampling for the Australian equine parasite research project. (Image copyright Ghazanfar Abbas, 2026)

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A curious welcome from some of the horses during fieldwork in Victoria. (Selfie) (Image copyright Ghazanfar Abbas, 2026)

Abstract: Over the past 25 years, significant progress has been made in understanding and managing equine gastrointestinal parasites in the Asia-Pacific region, particularly in Australia and New Zealand. This review synthesises current knowledge of the epidemiology, diagnostic methods, anthelmintic resistance (AR), and control strategies for major equine intestinal parasites, including cyathostomins, *Parascaris* spp., *Anoplocephala perfoliata*, and *Strongyloides westeri.* Recent studies highlight substantial regional variation in parasite prevalence, egg shedding and cyathostomin population composition, shaped by diverse climatic conditions. Of increasing concern is the emergence of resistance to commonly used anthelmintics which is now evident in both *Parascaris* and cyathostomins, although data for *S. westeri and A. perfoliata* remain limited. High-throughput molecular diagnostics, such as next-generation sequencing, have advanced species-level characterisation in Australia and Thailand. ELISA-based tests for *A. perfoliata* and encysted cyathostomins are promising but remain unvalidated and underutilised regionally. The routine use of combination anthelmintics, including benzimidazoles, praziquantel, pyrimidines, and macrocyclic lactones, may accelerate resistance across nematode and cestode populations, emphasising the need for regular efficacy monitoring and improved antiparasitic stewardship. Findings from recent research on horse parasites in Australia have informed the development of country's first national equine parasite control guidelines which recommend targeted or selective treatment strategies. However, the effectiveness of these strategies requires ongoing evaluation, particularly in year-round grazing systems in tropical and subtropical regions. Sustainable parasite control will depend on the integration of non-chemical strategies along with the use of anthelmintics and the establishment of a national parasite surveillance database. This review highlights the need for climate-specific treatment protocols, strengthened collaborative research infrastructure, and continued investment in innovative diagnostic and control methods to preserve equine health and anthelmintic efficacy across the region.

Ghizal Siddiqui and Yijia Ji (Jess) recently published "Validation of solvent proteome profiling for antimalarial drug target deconvolution" and we interviewed Ghizal and Jess about this publication.

1. Please tell us about your latest publication in relation to Target elucidation in antimalarial drug discovery and the use of solvent-induced proteome profiling (SPP)?

Ghizal: Phenotypic screens excel at discovering novel antimalarial compounds, but revealing their exact protein targets, which is known as target deconvolution and remains a key bottleneck in drug development. Solvent-induced Proteome Profiling (SPP) solves this by exploiting changes in protein structural stability caused by drug binding. When a drug binds a target, it alters how that protein denatures across an organic solvent gradient. Because SPP is entirely label-free, it allows us to screen candidate compounds in their native state, without chemical modifications or probes that could disrupt drug activity. In our publication, we validated SPP across the *Plasmodium falciparum* proteome using known antimalarials, showing that it can pinpoint targets like PfDHFR and PfATP4 directly in complex biological samples.

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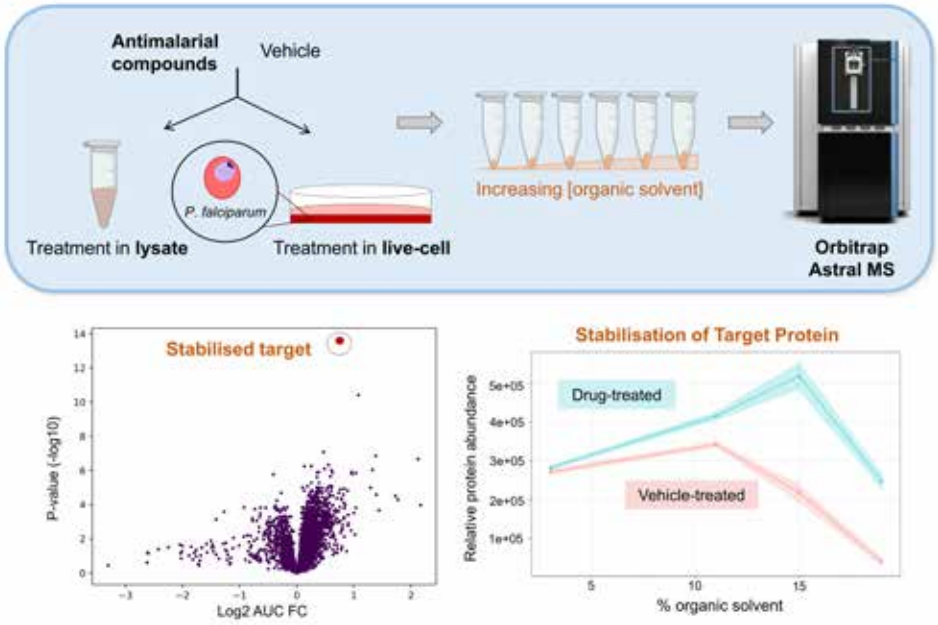


Image (L) Solvent Proteome Profiling for Antimalarial Drug Target Deconvolution

This study validates solvent proteome profiling (SPP) as a proteomics-based approach for identifying drug targets in *Plasmodium falciparum*. Using five antimalarial compounds, the authors demonstrate that SPP can identify known drug targets in both lysate and live-cell conditions, while introducing individual solvent percentage analysis and a one-pot mixed-drug approach to improve target deconvolution and streamline experimental workflows.

Graphical Abstract for https://www.sciencedirect.com/science/article/pii/S2211320725000491

2. What is the significance of using "live-cell treatment SPP as a novel approach" and "one-pot mixed-drug SPP" for parasite control?

Ghizal: Both adaptations significantly advance how we screen and validate antimalarials:Live-cell Treatment SPP: Traditional target deconvolution assays rely on cell lysates, which disrupt cellular architecture, organelle compartments, and native metabolic states, while keeping proteins in its native structure. However, live-cell SPP allows compounds to engage targets inside intact, living parasites under physiological conditions before lysis. This ensures target binding occurs in the presence of natural co-factors, active transport mechanisms, and cellular compartmentalisation, providing higher confidence and specificity for true target engagement (as demonstrated with pyrimethamine/PfDHFR). One-pot mixed-drug SPP: This workflow multiplexes compound evaluation by testing multiple drugs within a single lysate sample and mass spectrometry run. It cuts down sample input requirements, speeds up screening throughput, and introduces internal controls that directly benchmark experimental performance, making high-throughput target deconvolution significantly more accessible.

3. What are some of the challenges associated with kind of approach?

Ghizal: While SPP provides a powerful label-free platform, a few challenges remain inherent to the approach:

Solvent behavior variations: Not all proteins denature cleanly across standard solvent gradients; non-specific precipitation or complex multi-subunit interactions can complicate automated curve fitting.

Off-target distinctions: Distinguishing between direct high-affinity target binding and off-target interactions requires careful concentration-response profiling and rigorous statistical filtering. Further. complementing the technique with another independent drug target deconvolution assay helps in

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identifying the target.

4. Can you tell us about the "free online tool for analysing solvent stabilisation curves" and how this can be used by the wider research community?

Jess: CurveLine (https://analyst-suites.org/apps/curveline/) is a free, publicly accessible online tool that provides a convenient and streamlined way to analyse and visualise SPP data, developed by Hailey Zhang from the Monash Proteomics and Metabolomics Platform. All researchers need to do is upload an experimental design file and a Spectronaut protein-level abundance file, and CurveLine generates solvent stabilisation curves comparing treatment groups across the different solvent percentages, including error bars. It also makes it easy to search for and visualise individual proteins of interest, providing a straightforward way to explore and interpret SPP data without needing to manually create the solvent curves.

5. Jess has completed her Honours Degree in Pharmaceutical Science at Monash University, and has recently started her PhD in malaria research. Do you have any advice for other students who are thinking about doing research in drug discovery?

Jess: *My biggest advice would be to give yourself the space to explore different areas of research and see what genuinely interests you. If you had asked me during my undergraduate degree, I never would have thought I'd end up working with parasites, but now it's something I genuinely enjoy and it's become one of my favourite fun facts about myself.*

Don't be deterred by what you don't know. When you start in a new field, everyone is a beginner, including the researchers you look up the most to. What matters more is your willingness to keep learning, ask questions, and take on challenges. What I enjoy most about research is that it's not just about what I learn about the science, but also what I learn about myself along the way. Every challenge teaches me something new, and I've found myself becoming more resilient, adaptable and confident as I grow as a researcher.

6. What is next for this research in optimisation of existing antimalarials and the development of novel therapies?

Ghizal: Looking forward, our goal is to integrate SPP directly into early-stage antimalarial pipelines:

Accelerating novel therapeutics: SPP can rapidly deconvolute phenotypic hits with unknown mechanisms of action (MoA), accelerating the discovery of drug candidates against uncharacterised parasite targets.

Combination therapies & resistance Mapping: Applying one-pot mixed-drug SPP will enable us to study drug combination synergies, evaluate multi-target drugs designed to evade resistance mechanisms, and map target engagement changes in drug-resistant strains of *P. falciparum*.

Read the article:

Yijia Ji, Joshua P. Morrow, Christopher A. MacRaild, Haijian Zhang, Carlo Giannangelo, Ralf B. Schittenhelm, Darren J. Creek, Ghizal Siddiqui, "Validation of solvent proteome profiling for antimalarial drug target deconvolution", International Journal for Parasitology: Drugs and Drug Resistance, Volume 29, 2025, 100626, ISSN 2211-3207, https://doi.org/10.1016/j.ijpddr.2025.100626 (https://www.sciencedirect.com/science/article/pii/S2211320725000491)

Abstract: Malaria remains a global health threat, with rising drug resistance accelerating the urgent need for new therapeutics. Target elucidation is a critical step in antimalarial drug discovery, enabling a deeper understanding of the molecular mechanisms of action of both existing and novel compounds. This study validates solvent-induced proteome profiling (SPP) as a proteomics-based approach for identifying drug-protein interactions in *Plasmodium falciparum*. SPP detects shifts in protein stability induced by ligand binding, allowing the identification of drug target/s without the need for compound modifications. Here, we successfully generated solvent denaturation curves for the *P. falciparum* proteome, and demonstrated the utility of SPP with five antimalarial compounds: pyrimethamine, atovaquone, cipargamin, MMV1557817 and OSM-S-106. In addition to measuring each compound's impact across the full denaturation curve, investigating protein levels at individual solvent percentages preserved specific stability changes that would otherwise be masked in pooled analyses performed by integral SPP. This strategy was critical for the identification of the cipargamin target, non-SERCA-type Ca2+transporting P-ATPase (PfATP4). Notably, we propose live-cell treatment SPP as a novel approach, demonstrating its ability to identify the validated target of pyrimethamine, bifunctional dihydrofolate reductase-thymidylate synthase (PfDHFR), with high specificity. We also introduced the novel one-pot mixed-drug SPP, which enables the evaluation of multiple drugs within a single

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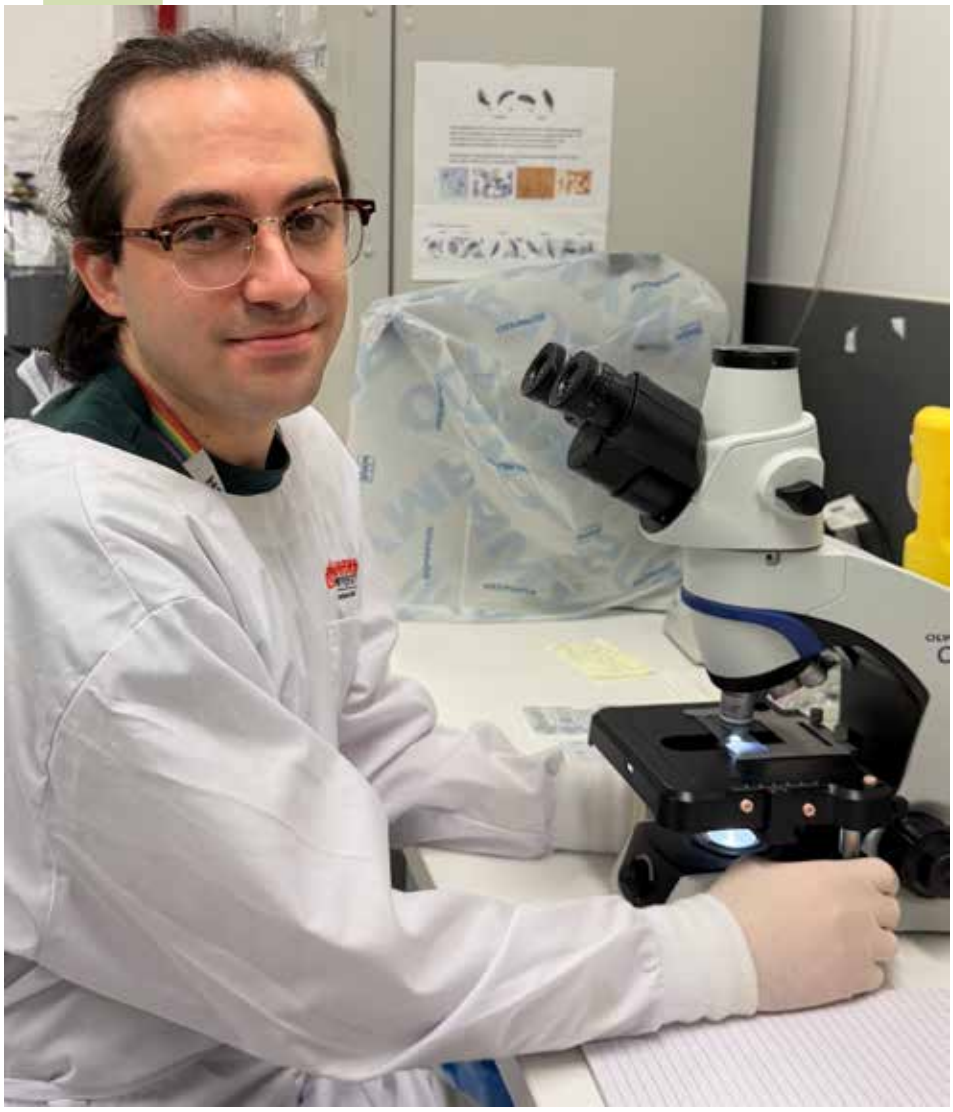


Image (L) Wisam Dawood, Griffith University, in the laboratory

lysate and experimental setup. This alternative method simplifies the experimental workflow and includes positive controls to affirm the performance of the experiment. Overall, this study demonstrates that SPP can be successfully applied in both lysate and live-cell treatment conditions to elucidate drug targets in *P. falciparum*, as well as providing additional information regarding the mechanisms of drug action, offering insights for the optimisation of existing antimalarials and the development of novel therapies.

Wisam Dawood and Katherine Andrews recently published "Antiplasmodial activity of pentyloxyamide-based histone deacetylase inhibitors against *Plasmodium falciparum* parasites" and we interviewed them about this research:

1. Please tell us about your latest publication in relation to targeting histone/lysine deacetylase (HDAC) enzymes as potential targets for the development of new antiplasmodial agents and what are the important factors when looking for new targets?

Malaria, caused by *Plasmodium* parasites, remains a major global health challenge, and the emergence and spread of resistance to existing antimalarial drugs means that there is a need to identify new therapeutic targets and treatment strategies. Histone deacetylases (HDACs) are potential antimalarial drug targets because they regulate protein acetylation, a critical process involved in gene expression, parasite development, and survival. *P. falciparum* possesses three HDAC enzymes that have been shown to be essential during the intraerythrocytic stage of the parasite lifecycle and two of these are ~80% different (at the amino acid level) to human HDACs. This is an important feature for malaria drug candidate to avoid host-targeting effects.

In our recent study, we investigated a series of pentyloxyamide-based HDAC inhibitors against *P. falciparum* and identified several compounds with potent antiplasmodial activity. One compound met the Medicines for Malaria Venture (MMV) early lead criteria and demonstrated nanomolar activity against both blood-stage and liver-stage parasites while exhibiting selectivity for parasites over human cells. The lead compound also induced histone H4 hyperacetylation and stabilised PfHDAC1, supporting HDAC inhibition as its mechanism of action.

2. What are some of the challenges associated with this kind of research?

One of the major challenges in this field is the limited availability of molecular and structural tools for *P. falciparum* HDACs. No experimentally determined crystal structures are currently available, and recombinant

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protein has only been produced for one of the three essential *P. falciparum* HDACs, with limited purity and suitability for biochemical studies. In addition, in silico homology models for the two more divergent *P. falciparum* HDACs are often highly disordered, restricting their utility for analysing inhibitor-target interactions in silico.

As a result, much of the drug discovery process relies on whole-cell screening rather than direct enzyme inhibition assays. Although several approaches can be used to investigate HDAC inhibition, including the hyperacetylation assay presented in this study, these methods are surrogates of changed acetylation rather than direct evidence of effects on individual HDAC isoforms. Consequently, it remains difficult to determine which specific *P. falciparum* HDAC is being targeted by a given inhibitor.

Another challenge is identifying compounds that combine potent antiplasmodial activity with sufficient selectivity and favourable drug-like properties. While many HDAC inhibitors display potent activity against malaria parasites in vitro, most have short in vivo half-lives and other pharmacokinetic properties that are not suitable for malaria drugs. The means that additional medicinal chemistry optimisation would be needed before they can be considered viable drug candidates. We recently published a review of hydroxamic acid-based inhibitors investigated against *Plasmodium* parasites, which highlights many of these challenges and the opportunities that remain for the development of next-generation antimalarial HDAC inhibitors.

3. What is next for this research?

Despite the challenges encountered in this area of research, significant progress has been made in advancing the discovery of novel antiplasmodial HDAC inhibitors. We are currently applying machine learning approaches to identify new compounds that target *P. falciparum* HDACs to prioritise compounds for experimental testing. Building on two of our previously published studies, we have expanded and retrained these models using larger and more structurally diverse datasets, improving their ability to identify novel active compounds. Furthermore, our group is more broadly investigating the lysine acetylation posttranslational modification in an Australia Research Council (ARC) Discovery grant in collaboration with Dr Ghizal Siddiqui from Monash University. Ultimately, we hope these studies will identify new HDAC substrates as possible drug targets to aid in the development of next-generation antimalarial drugs.

Read the publication:

Wisam A. Dawood, Gillian M. Fisher, Josefa Kremeyer, Fabian Fischer, Jessica L. Home, Christopher D. Goodman, Kwong Sum Lam, Alexander G. Maier, Thomas Kurz, Katherine T. Andrews, "Antiplasmodial activity of pentyloxyamide-based histone deacetylase inhibitors against *Plasmodium falciparum* parasites", International Journal for Parasitology: Drugs and Drug Resistance, Volume 29, 2025, 100608, ISSN 2211-3207, https://doi.org/10.1016/j.ijpddr.2025.100608 (https://www.sciencedirect.com/science/article/pii/S2211320725000314)

Abstract: Malaria is caused by Plasmodium parasites and remains a significant health concern for almost half the world's population. There are estimated to be > 240 million malaria cases and approximately 600,000 malaria-related deaths annually, mainly due to infection with *P. falciparum* parasites. Parasite drug resistance is impacting malaria prevention and control efforts, and as part of the malaria eradication agenda, new drugs with novel mechanisms of action are needed. Histone/lysine deacetylase (HDAC) enzymes play essential roles in *Plasmodium* biology and are potential targets for the development of new antiplasmodial agents. In this study, a panel of 24 HDAC inhibitors with hydroxamic acid zinc binding group, a pentyloxyamide connecting unit linker region and substituted 4-phenyl and 4(pyridinyl)thiazole cap groups were investigated for in vitro activity against asexual intraerythrocytic stage *P. falciparum* parasites, the life cycle stage responsible for the clinical symptoms of malaria. The most potent compound (4o) had a *P. falciparum* IC50 of 20 nM and >250-fold greater selectivity for *P. falciparum* versus human cells. Compound 4o was also active against exoerythrocytic stage parasites (IC50 24 nM), which are a target for malaria prevention. In contrast, 4o lacked potent activity against late-stage gametocytes (IC50 > 2 μM), which are a target for malaria transmission-blocking drugs. Compound 4o and analogues caused in situ hyperacetylation of *P. falciparum* histone H4, indicating deacetylase inhibition. Furthermore, 4o was found to stabilise PfHDAC1 in P. falciparum protein lysates using solvent-induced protein stability Western blot assays with anti-PfHDAC1 antibody. Together, these data provide new structure-activity relationship and mechanistic insights on pentyloxyamide-based HDAC inhibitors as potential therapeutic starting points for malaria.

ASP Researcher Exchange, Travel and Training and JD Smyth Postgraduate Student Travel Funding Scheme, Mentorship scheme, and 2027 ASP Conference









ASP Researcher Exchange, Travel and Training Funding Scheme

Congratulations to the ASP Researcher Exchange, Travel and Training and JD Smyth Postgraduate Student Travel awardees from the March 2026 funding round.

The next deadline for applications is 30th March 2027.

JD Smyth Postgraduate Travel Award winners

Natasha Sharma, PhD Candidate, The University of Melbourne for a Researcher exchange with training at the School of Biological Sciences at Queen's University Belfast under the supervision of Dr Paul McVeigh. Location: Queen's University Belfast, Northern Ireland, United Kingdom



2026 JD Smyth Postgraduate Travel Award winners (starting top left) Natasha Sharma, Lim Si En Nicole, Zi Kang Ooi, and Endris Aman Ali, and all prize winners with Aaron Jex.

Closing dates for ASP awards

ASP Fellowships
1 January 2027

ASP Researcher Exchange, Travel and Training Awards & JD Smyth PG Travel Award
30 March 2027

John Frederick Adrian Sprent Prize
30 September 2028

Bancroft-Mackerras Medal for Excellence
30 September 2027

Bridget Ogilvie Medal
30 September 2027

News from the ASP Network for Parasitology

from 7th September – 26th October (8 weeks) to conduct comparative infection experiments using the European snail *Lymnaea stagnalis* and locally available *F. hepatica* strains, which take approximately 42 days to complete. In parallel, Natasha will undertake hands-on training in RNA-sequencing pipelines using existing datasets within the McVeigh laboratory, including small RNA-seq and single-cell RNA-seq workflows. Additional exposure to definitive host systems (e.g. *Strongyloides ratti* in rats and Dirofilaria immitis in mice) will provide complementary training in well-annotated models to support my primary *F. hepatica*–snail analyses. Together, this will enable Natasha to establish and refine analysis workflows that can be applied to Australian datasets. This proposed plan has been developed in collaboration with supervisors at the University of Melbourne and the McVeigh group at Queen's University Belfast.

Lim Si En Nicole, PhD Student, Australian National University for a Research exchange at Papuan Community Health and Development Foundation (YPKMP) 13-19/4/2026 in Papua, Indonesia to investigate immune responses in human malaria infection. My work in Papua will investigate the role of platelets and splenic macrophages during malaria infection, particularly how they regulate parasite clearance. It will also determine whether pathways identified in mouse models are conserved in human malaria. I will have the opportunity to learn from experts working in the field. I will gain experience working with clinical samples and conducting research in a malaria-endemic setting. I hope to have insightful discussions with the locals to better understand the real-world problems that they face, and return with better ideas and design better experiments that will answer the questions that have even greater impact on society.

Zi Kang Ooi, PhD Candidate, Walter and Eliza Hall Institute of Medical Research for a Researcher Exchange to collaborators in Indonesia to undertake essential laboratory work in collaboration with Dr Inke Nadia (Faculty of Medicine, Universitas Sumatera Utara Medan, Indonesia) for 32 days 05 April 2026 – 07 May 2026. Dr Inke and her team are investigators in the Indonesian ZOOMAGIC study, which is conducted in partnership with a co-supervisor, A/Prof Matt Grigg (Menzies School of Health Research) to generate high-quality serological data to enhance understanding of *P. knowlesi* transmission and support malaria surveillance and elimination efforts in the region.

Endris Aman Ali, PhD Candidate (DVM), The University of Melbourne for a Researcher exchange and seminar, to visit to the small ruminant parasitology group at the Ontario Veterinary College (OVC), University of Guelph, Canada, Department of Pathobiology, Canada from August 22 to 26, 2026. The visit will focus on knowledge exchange, collaborative discussions, and hands-on exposure to advanced diagnostic and research approaches for gastrointestinal nematodes (GINs) of small ruminants. Endris will gain exposure to laboratory and analytical approaches used in host–parasite immunological studies and parasite diagnostics and discuss potential integration of these approaches with molecular parasite surveillance methods such as next-generation sequencing. This exchange will facilitate the transfer of knowledge, strengthen international collaboration in veterinary parasitology and contribute to the development of integrated diagnostic and epidemiological approaches for parasite control. classification, 7th May – 8th July 2025.

Researcher Exchange, Travel and Training Award winners

Tanya King, PhD candidate, Federation University Australia for a Researcher Exchange to James Cook University (Nguma-bada Campus, Smithfield, Cairns, Queensland). This structured two-week exchange will facilitate intensive laboratory training, collaborative experimental work, and knowledge exchange between the two institutions, supporting the development of new techniques for Tanya to learn and data relevant to ongoing research in equine parasitology and host-parasite interactions training Tanya in the methodology of the production and expression of proteins of interest identified from the proteomic parasite analysis. This will include training in techniques used to generate recombinant proteins and approaches for preparing these molecules for downstream immunological assays. transfer of specialised laboratory techniques, training opportunities, and the generation of new preliminary data to support ongoing collaborative research.

Senna Steen, PhD Candidate, Burnet Institute for a Researcher Exchange to Department of Pathology, Downing Site, Tennis Court Road, Cambridge, CB2 1QP, United Kingdom, for 3 months, January – April 2027 to test that their frontrunner compounds retain activity against transmission stage parasites to progress their development as novel dual-stage antimalarials capable of preventing both malaria disease and spread by conducting specialised transmission-blocking assays in the world-leading laboratory of A/Prof Blagborough at the University of Cambridge.

Melissa Carabott , PhD Candidate, RMIT University for training with Professor Brian Dixon at the University of Waterloo for 10 days to learn how to maintain a cell line as well as infect and maintain infected cells with microsporidians. Location: Waterloo, Ontario, Canada: University of Waterloo

JD Smyth Postgraduate Student Travel Award

Financial assistance is to be provided to full-time postgraduate student members of at least 6 months standing

who are enrolled at a recognised Australian University for the purpose of travelling overseas to gain knowledge on techniques that may not be available in Australia, to form liaisons that may benefit their careers in the longer term and to promote the cause of parasitology in Australia. The fellowship is not provided for the primary purpose of attending a conference. The maximum value of the fellowship is to be determined annually by the Council. Recipients are to be chosen by a selection committee appointed by Council.

Applications should include details of the travel to be undertaken, the applicants research, evidence of the supervisor's support and an abbreviated CV. If attendance at a conference is to form part of the travel then a copy of the conference abstract should also be included. The application must include a CV.

Awardees will be required to provide a report of their trip within three months of return from their travel.

https://www.parasite.org.au/awards/jd-smyth-postgraduate-travel-awards/

Network Mentorship Scheme

Network Mentorship Scheme Early career researchers are encouraged to apply to the Network Convenor (nick.smith@parasite.org.au), in strict confidence, for funding to participate in the Network Mentorship Scheme. The scheme allows researchers to be paired with experienced, successful academics to discuss, plan, prioritise and set targets for their career. Arrangements for professional development and progress to be reviewed by the pair annually. Importantly, mentors need not be from an individual's home institution. The scheme covers mentorship across all aspects of working in parasitology including research, teaching, leadership, communication and outreach and other areas of professional development.

2027 ASP Annual Conference

We hope you enjoyed the 2026 ASP Annual Conference in the Gold Coast in June and July.

Next year the ASP Annual Conference will take place from the evening of Monday 28th June - Thursday 1st July 2027 at The University of Tasmania in Hobart, Tasmania and we hope to see you all there (remember you said you would definately be there when I asked at the 2026 AGM :)

More conference details coming soon.

With best wishes,

Nick and Lisa

www.youtube.com/user/ASPParasiteNetwork
www.parasite.org.au
www.facebook.com/ASParasitology
https://www.linkedin.com/company/the-australian-society-for-parasitology/

ASP Researcher Exchange, Travel and Training and JD Smyth Postgraduate Student Travel Funding Scheme reports

JD Smyth Postgraduate Travel Award Reports

Dr **Ashton Kelly** won an ASP Travel Award in 2025 for a Researcher Exchange to Leiden University, The Netherlands. Ashton is now a Postdoctoral Researcher in the Mota Lab at GIMM, Lisboa, Portugal and gives this report.

Ashton: Thank you again to the Australian Society for Parasitology for awarding me a travel grant that allowed me to visit Leiden University Medical Center and undertake training with the Yazdanbakhsh and Roestenberg laboratories. The main goal of this trip was to gain expertise in data-integration and analysis methods developed in Europe to advance my work on immune heterogeneity during blood-stage *P. falciparum* infection. I was able to achieve this, and the experience was incredibly valuable. As both laboratories work extensively on P. *falciparum,* it was a unique opportunity to learn directly from their group leaders and lab members.

The Yazdanbakhsh laboratory, in particular, focuses heavily on large-scale, data-driven immunology and uses a wide range of analytical tools. Their interest in heterogeneous responses to infection and vaccination aligns closely with my own research, making this visit especially beneficial. I had several productive meetings with members of the group throughout the week.

I began the visit by presenting my work to both the Yazdanbakhsh and Roestenberg groups (photos below).

News from the ASP Network for Parasitology

This gave their immunologists and bioinformaticians a clear overview of the research I completed during my PhD and how it is continuing into my postdoctoral work. Because my project focuses on blood-stage *P. falciparum*, the researchers in Leiden were able to offer thoughtful feedback and were genuinely interested in the work being done in Australia. This presentation set the tone for the week, leading to multiple meetings and hands-on sessions focused on analysis methods and potential areas for collaboration.

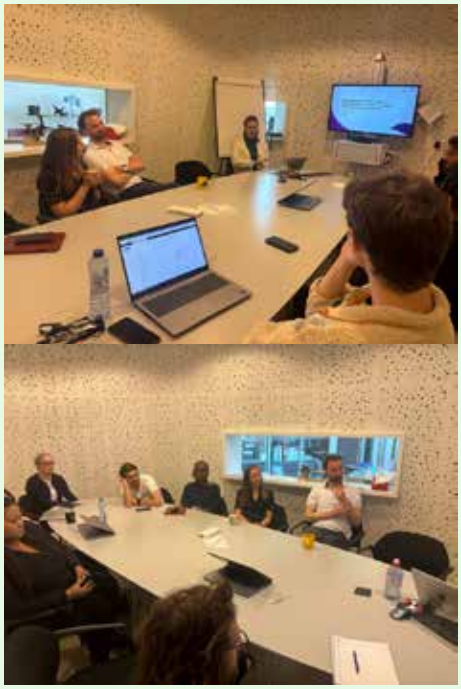
I met with Yoanne Mouwenda, a postdoctoral researcher studying heterogeneous responses to *Plasmodium* infection based on whether individuals grew up in rural or urban regions, this was highly relevant to my own findings on how previous co-infections influence responses to *Plasmodium*, and helpful to compare perspectives.

I met with Mikhael Manurung, a bioinformatician in the Yazdanbakhsh lab. Together, we went through the pipelines commonly used in their group, including their MOFA (multi-omics factor analysis) workflows for integrating multi-omics datasets. This was directly aligned with the aims of my project. Mikhael walked me through the packages, inputs, and structure of their pipelines so that I can apply them to my own data. Our discussions on Extreme Gradient Boosting (XGBoost) and DIABLO—my primary reason for travelling to Leiden—were particularly valuable, and I continued to meet with him throughout the week.

I met with Koen Stam, a data scientist in the Yazdanbakhsh laboratory. Koen works extensively with CyTOF data on cell types similar to those in my project, though in a different model. He showed me their analysis platform and approaches, and I learned several improved methods for analysing my CyTOF data as well as strategies for data integration that their group frequently uses.

My main objective—deepening my understanding of data-integration methods—was achieved primarily through my sessions with Mikhael and Koen. Since returning to Australia, I have carried out additional experiments and have begun implementing DIABLO and XGBoost in my analyses. Although the work is ongoing, I now have strong connections with the Leiden groups and can reach out to them as needed. Overall, this was an incredibly valuable experience, and I am deeply grateful to the ASP for supporting my travel. Without this grant, I would not have been able to visit LUMC, build these connections, or learn the techniques that are now shaping the next stage of my research.

Photos of Ashton Kelly on her ASP Travel Award to Mota Lab at GIMM, Lisboa, Portugal.



Deonne Walther, PhD Candidate at AITHM, James Cook University, won a JD Smyth Travel Award in 2025 to attend MBL in Woods Hole. This is her report:

Deonne: I would like to sincerely thank the Australian Society for Parasitology for supporting my participation in the Marine Biological Laboratory (MBL) Biology of Parasitism course in Woods Hole, Massachusetts. I am extremely grateful for the opportunity to attend this internationally recognised training program, which has had a significant impact on my scientific and professional development. It was a privilege to be surrounded by talented researchers from across the globe, united by a shared curiosity, passion, and enthusiasm for the study of parasites. The opportunity to exchange ideas with such an inspiring community was truly rewarding.

The MBL Biology of Parasitism course provided intensive training in modern parasitology through a combination of lectures from internationally recognised experts and extensive hands-on laboratory research. The experience broadened both my technical expertise and my understanding of hostparasite biology.

During the course, I participated in several research projects that exposed me to a diverse range of parasites, host systems, and cutting-edge experimental techniques. The course-directors and module heads were exceptional and did a fantastic task of putting cohesive, in-depth experiments together in a relatively short time. These included investigating the parasite *Crithidia* within mosquitoes, learning methods for generating genetically modified mosquitoes and conducting behavioural assays, and examining the host TH2 immune response to Ascaris infection. One of the most valuable aspects of the course was the opportunity to gain hands-on experience with techniques that are not routinely available within my

ASP Researcher Exchange, Travel and Training and JD Smyth Postgraduate Student Travel Funding Scheme reports

current research environment.

Throughout the course, I received practical training in genetic modification, confocal microscopy, mammalian cell culture, flow cytometry, bioinformatics, animal experimentation, and many other advanced methodologies. Learning these techniques directly from internationally recognised experts provided not only technical proficiency but also a deeper understanding of how they can be applied to answer complex questions in parasitology.

As we are a relatively small research institute, opportunities to access specialised training are limited, making this experience particularly valuable. The knowledge and expertise I have gained will not only strengthen my own PhD research but will also allow me to support colleagues with their experiments, troubleshoot new methodologies, and introduce new techniques within our laboratory. I look forward to sharing these skills through regular collaboration and mentoring, helping to build additional research capability within our institute and ensuring that the benefits of the ASP's investment extend well beyond my own project.

The course also fostered numerous new professional connections with researchers and fellow students from around the world. These relationships have the potential to develop into future collaborations and have significantly expanded my international research network. The collaborative nature of the course encouraged scientific discussion well beyond the laboratory (often continuing at the Captain Kidd) where conversations sparked new ideas, challenged existing perspectives, and inspired future research directions.

Beyond the laboratory, the course offered a number of memorable social and cultural experiences that contributed significantly to the overall researcher exchange. These activities provided valuable opportunities to strengthen professional relationships, build lasting friendships, and immerse myself in the unique scientific community of Woods Hole. Highlights included celebrating the United States' Fourth of July festivities and parade (our float theme was parasites versus vectors/hosts in the World Cup), going whale watching on Cape Cod, visiting Martha's Vineyard, and taking a day trip to Boston.

These shared experiences fostered a strong sense of comradeship among participants and created an environment where scientific discussions continued well beyond the laboratory. The balance between intensive scientific training and these shared experiences made the programme truly exceptional.

The knowledge and skills gained will contribute to my ongoing research, future grant applications, and the development of new research directions. The exchange formed part of my PhD research under the supervision of Distinguished Professor Alex Loukas at James Cook University and provided an opportunity to develop new skills and establish international collaborations.

The ASP JD Smyth funding was used to support costs associated with attending the MBL Biology of Parasitism course. Overall, this experience has strengthened my confidence as an independent researcher and equipped me with technical expertise, international collaborations, and a broader scientific perspective that will continue to shape my career. It has also enabled me to bring new knowledge and methodologies back to Australia, where I hope they will benefit not only my own research but also that of my colleagues and the broader parasitology community.

Thank you ASP for your generous support. This Researcher Exchange has been one of the most valuable experiences of my career to date, and I am deeply appreciative of the Society's investment in supporting early-career parasitologists. I look forward to applying the skills, knowledge, and collaborations gained through this opportunity to my future research and to contributing to the Australian parasitology community.



Photos from the MBL course, including group photographs taken throughout from the Fourth of July parade, flagging for ticks, working in the laboratory.

ASP Researcher Exchange, Travel and Training and JD Smyth Postgraduate Student Travel Funding Scheme reports

In 2025 **Grace Peters**, PhD candidate from UNSW won an ASP Travel Award for a Researcher Exchange to Imperial College London and this is her report:

Grace: At Imperial College London I was able to train with researchers using a novel reporter mouse model known as Tocky (Timer of cell kinetics and activity). Developed by our collaborator Dr Masahiro Ono, Tocky offers a powerful way to study dynamic T cell immune responses in vivo, which in our case, we will use to better understand T cell behaviour during the pre-erythrocytic stage of malaria infection.

During my visit, I worked in the Department of Life Sciences at Imperial, especially with Dr Masahiro Ono and postdoctoral researcher Dr Jasmine Rowell. Together, we developed a full experimental protocol adapted for our research needs at UNSW, covering the full pipeline from genotyping to the in vivo experimental design, tissue harvesting and data analysis. These discussions and hands-on sessions were invaluable, helping me understand not just how to run the experiments,

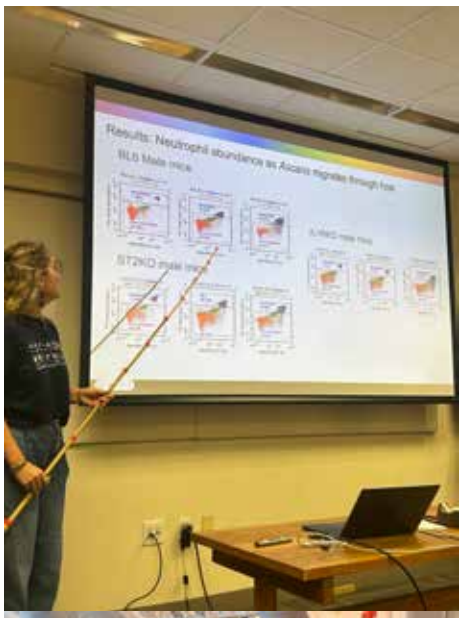


but how to think about their design and interpretation in the context of infectious disease.

I was also fortunate to contribute to ongoing experiments in the Ono lab. Being part of their workflow gave me real insight into how the Tocky model can be applied to an ongoing research setting and, importantly, what the actual downstream analysis looks like. Beyond the Tocky model itself, I was able to observe and receive training in multi-parameter flow cytometry and single-cell RNA sequencing — techniques that will undoubtedly benefit my PhD and future research well beyond this specific project.

One of the most valuable aspects of the trip, however, wasn't just the training but also meeting new people. I was welcomed into lab meetings, seminars, and social events and had the chance to build connections with other PhD students and postdocs in my field, all of whom were generous with their insights and were extremely welcoming. I left London feeling part of a wider, collaborative community

Above: Grace Walking into ICL main campus— our building up on the right









Left Photos from Deonne Walther's MBL course, working in the laboratory, and proudly wearing Socceroos regalia with Conor McMeniman during the World Cup.

ASP Researcher Exchange, Travel and Training and JD Smyth Postgraduate Student Travel Funding Scheme reports

of scientists that I hope to stay connected with in the years to come.

Beyond just the wet-lab skills, I gained confidence in areas I was initially anxious about — especially bioinformatics — and I'm incredibly grateful for the support of the Australian Society for Parasitology in making this trip possible. I'm excited to establish the Tocky model here at UNSW and further local capacity for preclinical immunology research in Australia.



Grace: The Ono Tocky lab at ICL

In 2026 **Lim Si En, Nicole**, PhD Candidate, Australian National University won a JD Smyth Postgraduate Travel Award for a Research exchange at Papuan Community Health and Development Foundation (YPKMP) 13-19/4/2026 in Papua, Indonesia. This is her report:

Nicole: In collaboration with Dr Steven Kho from the Menzies School of Health Research, and his team of scientists and clinicians in Papua, we investigated the role of platelets s during malaria infection, particularly how they regulate parasite clearance via splenic macrophages.

We answered two research questions during this visit. First, whether levels of platelet-bound to *Plasmodium*-infected red blood cells (P-iRBC) in the bloodstream are elevated in splenectomised individuals (compared non-splenectomised) through flow cytometry on fixed patient blood.

Second, whether we observed coincidences of platelets and red blood cells in splenic macrophages using immunohistochemistry staining as evidence of P-iRBC phagocytosis. We also compared the coincidence between healthy, infected spleen intact and infected splenectomised individuals.

We performed a quality check on our samples by comparing parasitemia from flow cytometry to microscopy (gold standard). The samples were positively correlated. Next, we found that there is an increase in levels of P-iRBC in splenectomised versus spleen-intact individuals with malaria. Through microscopy, we observed evidence of coincidences of platelet and pigmented macrophages (ie macrophages that have phagocytosed platelets and red blood cells).

These results provide insight into the relationship between platelets and the erythrophagocytic clearance of parasites during malaria infection.



Endris Aman Ali, PhD Candidate, University of Melbourne (UOM) won an JD Smyth Postgraduate Travel Award for a Researcher Exchange to Ontario Veterinary College (OVC), University of Guelph, Canada, to visit the laboratory of Dr. Andrew Peregrine and Dr. Emma Borkowski 24–27 August 2026. This is his report:

Outcomes:

Research presentation and exchange

Endris: I am honoured to receive the 2026 JD Smyth Postgraduate Travel Award, which supported my participation in the 16th International Congress for Parasitology (ICOPA 2026) in Montreal, where I gave an oral talk titled, "A national survey of gastrointestinal nematodes in Australian dairy goats using faecal egg counts and deep amplicon sequencing." The travel award also enabled a subsequent research exchange at the OVC, University of Guelph, Canada.

My PhD research focuses on the



Nicole: With members of the lab and extended YPKMP team – after work badminton session

ASP Researcher Exchange, Travel and Training and JD Smyth Postgraduate Student Travel Funding Scheme reports

epidemiology, diversity and control of gastrointestinal parasites in Australian (dairy) goats. More broadly I am interested in parasite ecology and epidemiology, molecular diagnostics, mucosal immunity and anthelmintic resistance in small ruminants. The research exchange at OVC provided an excellent opportunity to connect these interests with the group's established research on gastrointestinal nematodes of small ruminants and host immunity.

During the four-day visit, I participated in a range of research activities within the Department of Pathobiology. These included clinical monitoring of sheep experimentally infected with Teladorsagia circumcincta, monitoring donor sheep infected with Haemonchus contortus and T. circumcincta, assisting with experimental infection work at the Ponsonby Research Station and learning cell harvesting from sheep blood. I met with researchers and postgraduate students working on anti-CarLA (carbohydrate larval antigen) antibody testing. I also attended the weekly laboratory meeting, providing an opportunity to engage with graduate researchers and discuss their ongoing projects.

Departmental seminar

As part of the exchange, I was invited to give a departmental seminar entitled "Epidemiology, diversity and control of gastrointestinal parasites in Australian dairy goats." The seminar presented key findings from my PhD research and provided an opportunity to discuss Australian goat parasitology with researchers and postgraduate students at OVC. The seminar also generated strong interest in my PhD research and opened discussions about potential areas for future collaboration.

New skills and knowledge

The exchange broadened my practical and conceptual understanding of small ruminant parasitology and host–parasite interactions. I gained hands-on exposure to experimental infection models in sheep, clinical monitoring of infected animals, saliva collection and laboratory tests for investigating host immune responses. I also gained insight into specialist cell-harvesting techniques used in research on immunity to gastrointestinal nematodes.

Collaboration and future opportunities

The visit established valuable connections with researchers and postgraduate students at OVC working on small ruminant gastrointestinal nematodes. I had individual discussions with PhD and MSc students and faculty members to learn about their ongoing projects and research programs. These interactions have provided a strong foundation for future collaboration, including joint grant applications and student supervision. The exchange has also expanded my international research network across Australia and Canada and strengthened my transition towards an independent researcher.

Acknowledgement

I sincerely thank the Australian Society for Parasitology for awarding me the 2026 JD Smyth Postgraduate Travel Award. It provided an invaluable opportunity to present my PhD research internationally at ICOPA 2026 and undertake a highly productive research exchange at the OVC.

I am equally grateful to Dr Andrew Peregrine and Dr Emma Borkowski for their generous hospitality, mentorship and willingness to share their research expertise. I also thank my PhD supervisors at the UOM for their continued support.

The JD Smyth Award has provided much more than financial support for travel: it has enabled meaningful international research exchange, practical skills development and the establishment of collaborations that I hope will contribute to my future research endeavours.



Above: Photos from Endris: Experimental infection and saliva collection from sheep at the Ponsonby Research Station (OVC), Seminar presentation at OVC Enjoining Ethiopian dishes at Guelph (Andrew, Emma, Jenny and Endris)

ASP Researcher Exchange, Travel and Training and JD Smyth Postgraduate Student Travel Funding Scheme reports

Zi Kang Ooi, PhD Candidate, Walter and Eliza Hall Institute of Medical Research (WEHI) and The University of Melbourne won a JD Smyth Postgraduate Travel Award for a Researcher Exchangein 2026 for a Researcher Exchange to Universitas Sumatera Utara (USU), Medan, Indonesia, 5 April – 10 May 2026. This is her report:

Zi: Thanks to support from the Australian Society for Parasitology (ASP) JD Smyth Postgraduate Travel Award, I undertook a research exchange at Universitas Sumatera Utara (USU) in Medan, Indonesia, as part of the ZOOMAGIC project. This collaborative study investigates zoonotic malaria transmission in North Sumatra and North Kalimantan, Indonesia and forms a major component of my PhD research on the use of serological tools to measure exposure to *Plasmodium knowlesi* and other malaria parasites.

During the exchange, I worked closely with Dr Inke Nadia and the USU research team to implement multiplex serological assays using the Luminex platform. Approximately 1,000 samples from the ZOOMAGIC cohort were processed, generating an important dataset that will contribute directly to my PhD and a planned first-author manuscript currently in preparation. A key outcome of the visit was capacity building within the Indonesian laboratory team. I provided hands-on training in sample processing, assay workflows, quality control procedures, data management and instrument troubleshooting. Through this training, local researchers and staffs gained practical experience using multiplex serology techniques and increased confidence in operating the MAGPIX platform independently. The exchange also strengthened the long-standing collaboration between researchers at WEHI, Menzies School of Health Research and Universitas Sumatera Utara. Working alongside colleagues in Indonesia provided valuable opportunities to share knowledge, standardise laboratory procedures and discuss future directions for collaborative malaria research.

Professionally, the exchange allowed me to further develop skills in multiplex serology implementation, data quality assurance, project management, laboratory troubleshooting and supervision of research staff. Importantly, it also provided firsthand experience conducting advanced laboratory work in a resource-limited setting, highlighting both the challenges and opportunities of implementing surveillance tools in endemic regions. In addition to laboratory activities, I presented project updates at stakeholder meetings on 2 June 2026, attended by representatives from the Indonesian Ministry of Health and other government agencies. These discussions highlighted the potential application of serological surveillance tools for monitoring malaria transmission and supporting elimination efforts.

The ASP Researcher Exchange Award made this visit possible and enabled activities that could not be conducted outside Indonesia due to local regulations governing biological samples. Beyond generating data for my PhD, the exchange strengthened international collaborations, supported local research capacity and contributed to ongoing efforts to better understand malaria transmission in Southeast Asia. I am grateful to ASP for supporting this exchange and any future publications and presentations arising from this work will acknowledge ASP support.





Zi: Training and supervision of USU laboratory staff during multiplex serology assay implementation and sample processing

Research team at Universitas Sumatera Utara following implementation of the MAGPIX platform and laboratory workflow training

Group photograph with collaborators from Universitas Sumatera Utara involved in the ZOOMAGIC project.

Left: Endris at ICOPA 2026 as part of his JD Smyth Travel Award

State News

Victoria

Victoria

State Outreach event

The Victoria ASP ECR & Student Summer Social Event was held from 5:30 pm to 8:00 pm 6th Febraury 2026 at TopYard Rooftop Bar and was attended by senior members of the ASP, early career researchers (ECRs), and students from institutions across Victoria. A total of 56 participants attended, representing the University of Melbourne, Burnet Institute, Deakin University, WEHI, RMIT, Monash University, and La Trobe University.

Funding was primarily allocated toward venue costs and catering for attendees. ASP branding was prominently displayed through banners and on-screen visuals throughout the event.

The venue was intentionally selected for its audiovisual capabilities, allowing for a slideshow showcasing highlights from the ASP Conference 2025 (Melbourne), alongside two featured presentations. The first presentation was delivered by Ms **Sonakshi Madan** (Deakin University), titled "Genomic epidemiology of *Plasmodium falciparum* infections in declining transmission, and sources of resurgence." The second presentation was given by Dr **Vito Colella**, who highlighted past ASP educational outreach initiatives. **This included visual material from the 2023 Australian Society for Parasitology documentary, "Beyond Borders: A One Health Intervention Trial Against Zoonotic Parasites in the Asia Pacific"** with photography and a talk around the project. Both presentations were well received, generating strong engagement, questions, and discussion from the audience.

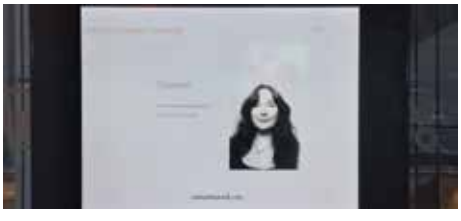
Following the presentations, a promotional slide for the ASP Conference 2026 (Gold Coast) was displayed to encourage participation from Victorian members.

The event successfully broadened engagement across institutions, particularly with increased attendance from groups that are typically underrepresented at such events, including the Burnet Institute and Deakin University (Geelong campus). It facilitated valuable networking opportunities between new and ongoing PhD students, as well as senior researchers. The presence of senior members was especially beneficial in enriching discussions during the presentations, and their participation should continue to be encouraged in future events.























Images from the ASP Vic State Outreach: ASP ECR & Student Summer Social Event for Victoria

State News continued





ASP State Outreach: ASP ECR & Student Summer Social Event for Victoria

Recent Publications, Prizes and Research Highlights

New paper published in The Lancet Microbe

Congratulations to **Lucas Huggins, Neil Young, Patsy Zendejas-Heredia, Prof Robin Gasser, Sze Fui Hii, Vito Colella** and colleagues on their recent publication in The Lancet Microbe:

Huggins L, Young N, Zendejas-Heredia P et al. "Nanopore long-read metabarcoding for comprehensive characterisation of parasitic nematodes in humans and animals: a development and diagnostic validation study" The Lancet Microbe (2026), https://www.thelancet.com/journals/lanmic/article/PIIS2666-5247%2826%2900004-2/fulltext

This study presents a novel nanopore long-read metabarcoding approach for the comprehensive detection and characterisation of parasitic nematodes across human and animal samples. The platform enables improved species-level resolution and detection of mixed infections, representing a major advance for parasite diagnostics, surveillance, and One Health research.

The publication has also been featured by The University of Melbourne, highlighting the potential of nanopore long-read metabarcoding to transform parasite diagnostics and surveillance. The article showcases how the new "Nemabiome" approach can simultaneously detect and differentiate a wide diversity of parasitic nematodes from complex human and animal samples, providing a powerful new tool for One Health research, biosecurity, and infectious disease monitoring.

Novel zoonotic filarial infection identified in Sri Lanka- The Lancet Regional Health Southeast Asia

Congratulations to **Lucas G. Huggins, Ushani Atapattu, Lakmini Liyanage Vito Colella** and colleagues from Sri Lanka on their recent publication in The Lancet Regional Health – Southeast Asia:

Gunaratna IE, Huggins LG, Atapattu U et al. "Emergence of a novel zoonotic brugian filarial infection during post-validation surveillance for *lymphatic filariasis* in Sri Lanka. https://www.sciencedirect.com/science/article/pii/S277236822600020X

This important study reports the emergence of a previously unrecognised zoonotic Brugia filarial infection identified during post-validation surveillance for lymphatic filariasis in Sri Lanka. The findings highlight the ongoing challenges of parasite surveillance following elimination programs and underscore the importance of integrating molecular diagnostics and One Health approaches into public health monitoring systems. The work also raises important questions regarding animal reservoirs and the potential for zoonotic transmission in regions approaching elimination targets.

Congratulations to **Paolo Bareng, Kenneth W Wu, Alyssa Barry, Rhea J Longley** and colleagues on their recent publication in the Lancet Microbe exploring how parasite antigen genetic diversity affects the performance of *Plasmodium vivax* serological exposure markers for malaria surveillance.

Using samples from multiple endemic regions, the study assessed how variation in parasite antigens can influence the accuracy of serological tools designed to detect recent *P. vivax* exposure. The findings provide important insights for improving the reliability and global applicability of malaria serosurveillance approaches, particularly across geographically diverse parasite populations.

This collaborative multicentre

State News continued

study highlights the importance of incorporating parasite genetic diversity into the development and validation of next-generation malaria diagnostics and surveillance tools.

Congratulations to all authors involved!

Bareng A, Wu K, Takashima E et al. "Assessing the effect of parasite antigen genetic diversity on performance of *Plasmodium vivax* serological exposure markers for malaria: a multicentre observational diagnostic accuracy study" The Lancet Microbe, 2026; 0 https://www.thelancet.com/journals/lanmic/article/PIIS2666-5247(25)00263-0/fulltext

ARC Linkage Project Success

Additional ARC Linkage Project Announcement

Congratulations also to ASP president **Aaron Jex** and collaborators on their successful ARC Linkage Project focused on toxic algal bloom diagnostics:

Investigators:

Associate Professor **Aaron Jex;** Dr Arash Zamyadi; Dr Nicholas Crosbie; Dr Anusuya Willis; Dr Hannah Sassi; Dr Peter Hobson; Associate Professor Zongyuan Ge

Partner organisations:

Melbourne Water Corporation; Water Research Australia Limited; Commonwealth Scientific And Industrial Research Organisation; South Australian Water Corporation

This project aims to develop rapid diagnostic technologies for the detection and management of toxic algal blooms in recycled water systems across Australia. Harmful algal blooms pose a major threat to recycled water supplies, particularly during peak summer demand. By enabling rapid and accurate diagnostics at source, the project seeks to improve bloom management, reduce unnecessary interventions, and support the long-term sustainability of recycled water resources nationwide.

Congratulations to **Vito Colella, Cameron Raw, Jessica Hoopes** and collaborators on securing an ARC Linkage Project:

A One Health strategy for companion animal health in Aboriginal communities

Investigators:

Dr Vito Colella; Dr Cameron Raw; Associate Professor Anke Wiethoelter; Professor Susana Vaz Nery; Ms Kristy Crooks; Dr Jessica Hoopes; Dr Phillip McDonagh

Partner organisations:

Animal Management In Rural And Remote Indigenous Communities Ltd; Hunter New England Health; Boehringer Ingelheim Animal Health Australia Pty Ltd

This project aims to improve companion animal health in Aboriginal communities through a culturally informed One Health framework. Using advanced diagnostics, the team will develop the first genetic database of parasites and vector-borne pathogens affecting dogs and cats in Indigenous communities. Importantly, the project adopts an Indigenist and First Nations-led approach to identify current strengths and gaps in animal healthcare delivery and to co-design culturally appropriate educational resources and long-term management strategies.

Federation University

Congratulations to **Rebecca Farnell** , named LambEx26 Coles Trailblazer of the Year for her proposal to develop a sheep worm surveillance database, helping producers better manage parasite risk, animal health and productivity.

The LambEx Coles Trailblazers program celebrates emerging leaders bringing


LAMBEX 2026

Sheep researcher wins Trailblazer title

Idea tackles big on-farm cost

NORTHERN S.A. MERINO EXPO

MERINO EXPO

FREE ENTRY

A SHOWCASE OF QUALITY MERINO STUDS, INNOVATION & LOCAL AGRICULTURE

Rebecca Farnell, Federation University wins LambEX26 Coles Trailblazer of the Year



fresh thinking, bold ideas and practical solutions to the challenges facing the Australian sheep industry.

State News continued



Rebecca says "LambEx, presenting in the semi-finals and the finals on the big stage of the Coles Trailblazers competition was a fantastic experience, and I highly recommend this for all upcoming young people in the sheep industry. I obtained lots of positive feedback, and it was lovely to see so many people interested in my research and the impact it can have for the industry. Being named the winner for 2026 was exciting, but it would not have been possible without the support of my supervisors, other parasitologists who reviewed my concept, the sub-committee, and the other Trailblazers. "

Congratulations to **Rebecca Farnell and Tanya King** for being one of the winning teams at the FORGE Pre-Accelerator Final Pitch Night for their project "RDT for Livestock Parasites is developing rapid diagnostic solutions to help livestock producers detect parasite infections earlier, improving animal health, productivity and decision making for livestock producers."

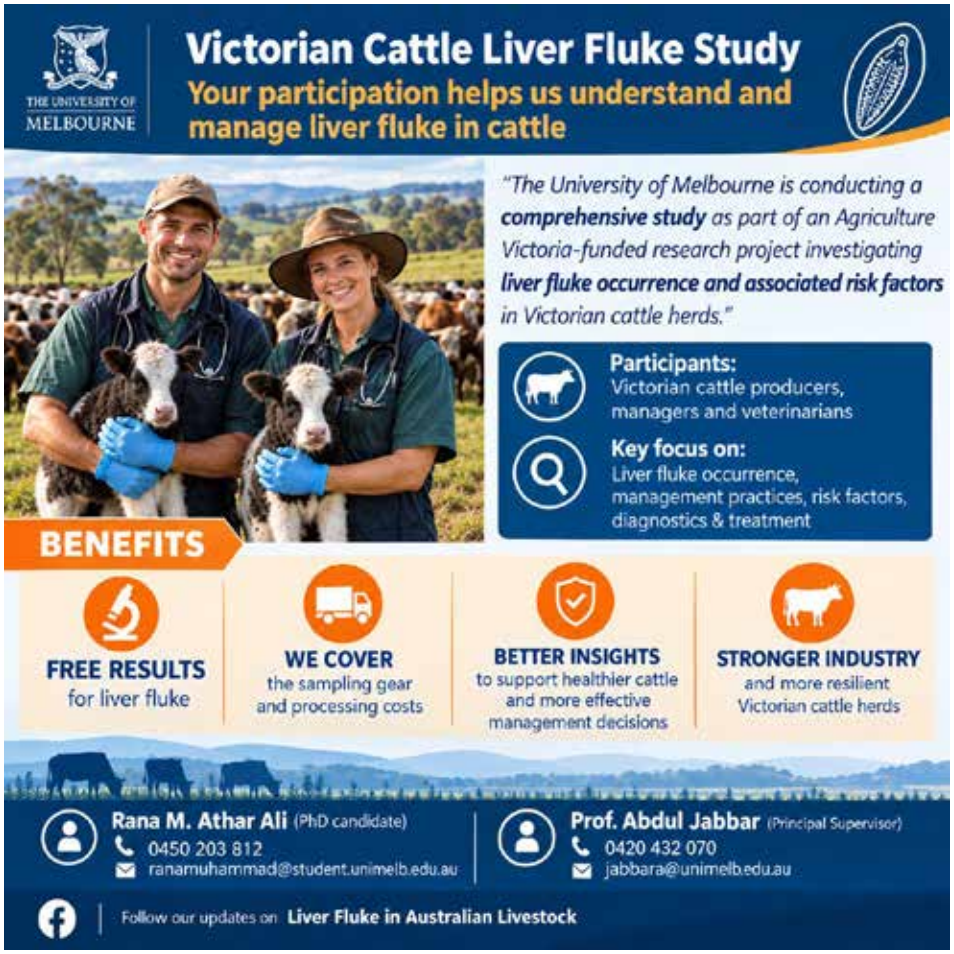
The inaugural FORGE Pre-Accelerator Final Pitch Night brought together nine startup teams to showcase the innovative ideas they have developed through Federation University's first pre-accelerator program. Participants have worked closely with mentors, industry experts and the FORGE team to validate ideas, refine business models and build the skills needed to turn innovative ideas into viable ventures. Congratulations to two winning teams, who were each awarded $20,000 in seed funding to support the next stage of their entrepreneurial journey.

PhD Seminar

invitation



ASP student member **Vincent Duru** (pictured) would like to invite you to his PhD completion seminar at the university of Melbourne scheduled a Monday, 9 November 2026 at 4–5 pm AEDT | 6–7 am CET / WAT (UTC+1) You can via Zoom: https://unimelb.zoom.us/j/81121514104?pwd=84jiJ1gk4N1eJ3lWyaYSazGwAmGvT4.1&from=addon



State News continued

Vic Cattle Liver Fluke Study

Are you a cattle farmer, livestock producer, manager, or veterinarian in Victoria?

We are inviting you to participate in a comprehensive research study investigating the occurrence of liver fluke (*Fasciola hepatica*) and associated risk factors in Victorian cattle herds.

Your participation can help us better understand where liver fluke occurs, the factors that contribute to infection, and current management, and treatment practices across Victoria, Australia.

What are the benefits of participating?

Free liver fluke testing and results

We cover sampling gear and processing costs

Contribute to improved understanding of liver fluke in Victorian cattle

Help support evidence-based liver fluke management and control in Australia

We are particularly interested in hearing from farmers and veterinarians across different regions of Victoria, including those who may have never tested their cattle for liver fluke.

For more information, please get in touch with our team at The University of Melbourne.

WA

Murdoch University

Congratulations to **Ashleigh Peck and Xavier Barton** who both graduated with their PhD's recently.





Ashleigh Peck and Xavier Barton who both graduated with their PhD's recently pictured here and (top) with Amanda Ash and Charlotte Oskam

ACT

ANU

Congratulations to **Cecilia Nie** (PhD student in Prof **Alex Maier's** group at the ANU), who claimed both second prize and the People's Choice award at the 2026 ANU Three Minute Thesis (3MT) Grand Final

Cecilia's talk was titled, "Spicing up cholesterol: a novel cure for parasitic diseases." She competed along with eleven other ANU PhD candidates, who each had to condense their years of research into three minutes and one slide. Topics ranged from nanopore water sensors to the neuroscience of healthy ageing (and parasite-fighting cholesterol).

Well done, Cecilia!

Tasmania

University of Tasmania

ASP 2027 Conference Co-chairs **Kate Hutson (Cawthron Institute) and Nick Fountain-Jones (UTas**) and their Scientific Committee members **Ivona Mladineo (UTas) and Silvana Bettiol (UTas**) are looking forward to welcoming you to Hobart for the 2027 ASP Conference, which will take place at the UTas Medical Precinct, Hobart from Monday 28th June - Thursday 1st July 2027. See you all there!



State News continued

South Australia

Adelaide University

Emma Mao (pictured), from Danny Wilson's lab at Adelaide University, recently submitted her PhD, with a successful defence in June – congratulations Dr Mao! Her thesis was on the Characterisation of Novel Drugs with Therapeutic Potential against the Pathogenic Parasites that cause Malaria and Toxoplasmosis. Emma's thesis explored new compounds for treating malaria and toxoplasmosis from diverse chemical libraries of synthetic repurposed drugs and natural microbial products. Through in vitro screening, she identified several promising compounds with potent anti-parasitic activity and low toxicity, and used proteomics, gene-editing and advanced microscopy approaches to investigate how these compounds act against parasites. Going forward, she hopes that this work will contribute to ongoing efforts to improve treatment outcomes for malaria and toxoplasmosis.



Emma Mao's graduation with two of her three amazing supervisors in academic gowns (A/Prof. Danny Wilson and Dr. Maria Gancheva (+Dr. Brad Sleebs not pictured here, but also an incredible supervisor located in WEHI), alongside the rest of the Wilson and Liffner labs in Adelaide

Some historical parasitology

In a search related to a parasite described in South Australia in 1910, Dr **Di Barton** stumbled across a medical doctor with a substantial interest in wildlife parasitology. Dr Edward Angas Johnson was an active member of the Field Naturalists Society at the same time as other more well-known parasitologists, such as WL Cleland and TH Johnston. He also studied under Sir Patrick Manson at the School of Tropical Medicine in London and was a vocal supporter of the creation of the Australian Institute of Tropical Medicine in Townsville. He was active in aspects of public health with concerns over the transmission of Echinococcus granulosus (hydatids) and presented many public lectures on human parasites and diseases. Over the years he collected or reported on trypanosomes (causing Surra disease) in camels in the outback, trypanosomes in

State News continued

freshwater turtles, parasites of dingoes, copepods from sharks, cestodes from wombats and reported the first (and only) case of trichinellosis in Australia. Di has written up his story which will be published in the next issue of the South Australian Journal of Medicine.

Meanwhile in Adelaide...**Ian Beveridge** (University of Melbourne) was visiting the South Australian Museum, **Lesley Warner, Dr Di Barton and Dr Leslie Chisholm** gathered with Ian for lunch and ran into **Kate Hutson** (the Tasmanian ASP rep; Cawthron Institute, NZ). A wide-ranging discussion on various wildlife parasites ensued. See photo for evidence!



Image (above) , Kate Hutson, Di Barton, Leslie Chisholm, Ian Beveridge and Lesley Warner

NSW

UNSW

Parasites in the Media

Claire Sayers' malaria research featured in the Sydney Morning Herald in May. Following an interview with science writer Angus Dalton, the story, "Mosquitoes may hold the key to male contraception", was published online then made the front page of the newspaper. The full story can be found here:

https://www.smh.com.au/national/nsw/a-sydney-scientist-studied-a-deadly-parasite-she-found-a-possible-key-to-male-contraception-20260429-p5zs2v.html


The Sydney Morning Herald

Thursday, May 7, 2026 $5.20 INDEPENDENT. ALWAYS. First published 1831 No. 58,839

THE KING'S SCHOOL
THE FAREWELL SPEECH 'JOKE' THAT ENDED IN PRINCIPAL'S SACKING
NEWS PAGE 4

SUPPLY FEARS
$10b plan to boost fuel and diesel reserves
NEWS PAGE 3

SCIENCE
Mosquitoes may hold the key to male contraception
NEWS PAGE 21

Claire was then invited for an ABC Radio interview with Prue Bentley for the Victorian Statewide Drive's Curious Nerd Club segment. The interview can be found here as a podcast episode (12th May from 2:42:35): https://www.abc.net.au/listen/programs/vic-statewide-drive

It is wonderful to see such enthusiasm for discovery research and parasitology.

University of Sydney

We are excited to welcome **Priscilla Huynh** on board as a PhD student. Priscilla was an AVBS honours student working on the seasonality, abundance and diversity of intermediate snail hosts of *Fasciola hepatica i*n the NSW Southern Tablelands last year. After a six-month break, she kicked off her PhD in July by presenting an update on her snail project findings at the ASP conference on the Gold Coast. She then spent two weeks in Canada in August, during which time she attended the ICOPA conference in Montreal with the rest of our team. In amongst all the travel and conferences, she managed to also get her honours Opinion article published in Trends in Parasitology, which is quite an achievement for someone so early in their candidature!

Our visiting Postdoc **Hira Muqaddas** is coming to the end of her time in our lab and will be heading back to Pakistan in November. While here with us, she has contributed to a variety of projects that have given her a wide range of experiences in the lab and field, including our wildlife liver fluke projects, leptospirosis projects in collaboration with the Elizabeth Macarthur Agricultural Institute, Whole Genome Sequencing projects on *Fasciola* and *Echinococcus* samples from Australia, Pakistan and around the world, morphology projects that have expanded her microscopy skillset, including applying Tana's amazing microCT work on some rumen fluke samples of her own, to name just a few! While we will miss having her on our team, we are excited for what her future holds, including the amazing skills she will bring back to Pakistan and share with her team. She was also fortunate to join us in Montreal, during which time she made some great connections with international teams that we're sure will take her even further.

MPhil student **Hayley DeCristi** has been working hard on her in vitro vs. in vivo projects and has built an amazing repertoire of SEM and confocal images providing incredible insights into the growth and development of *Fasciola hepatica.* We can't wait to see what her project uncovers next! Both **Hayley and Priscilla** will be travelling to Giessen University in Germany and UniBern in Switzerland in November for a research exchange with Simone Haberlein and Natalie Widemar's teams. We wish them the best of luck on their European adventures and have our fingers crossed that they will get to experience a white Christmas!

State News continued

Vets without Borders

In early May, **Nichola Calvani** spent a week with **Nick Sangster** in Vanuatu with Vets Beyond Borders, where they delivered parasitology training to a brilliant group of 16 paravets from three islands. The program combined short lectures with hands-on practicals covering sample collection, parasite ID (worms + ticks), blood smears, faecal flotations, and egg counts. All of these are core skills that underpin day-to-day animal health work and outbreak-ready surveillance.

The University of Sydney significantly increased local capacity building by kindly donating three light microscopes and three stereomicroscopes, meaning participants can now undertake key diagnostics locally. This is a huge achievement, as one participant noted that they now don't need to send samples overseas for routine biosecurity and animal health testing!

Along with some microscopes, Nichola packed a VR headset so participants could complete the Australian Society for Parasitology "Parasites in VR" modules to wrap up the training -their first VR experience!

Of all the sessions, tick ID stole the show. The group is now excited to undertake surveillance to ensure Rhipicephalus australis stays out of Vanuatu. Talk about training in action!

https://vetsbeyondborders.org/











Images Nichola Calvani and Nick Sangster in Vanuatu with Vets Beyond Borders training paravets,



State News continued









State News continued

Images (previous page and right) Nichola Calvani and Nick Sangster in Vanuatu with Vets Beyond Borders training paravets,





Queensland

JCU

For those who, like **Richard Bradbury,** JCU, are fascinated by creepy and crawly things that can live inside of you, do catch the new series of "Monsters Inside Me". Richard was a scientific consultant on the series, and to be interviewed about two cases I was involved with for separate episodes. The series premiers on The Discovery Channel, Wednesday 11 November.

https://www.youtube.com/watch?v=aMqCnA3atMg

ASP Fellows news

Alan Cowman FASP has received the 2026 Macfarlane Burnet Medal and Lecture from the Australian Academy of Science, one of the Academy's premier career awards. The citation recognises his major contributions over more than 30 years to *Plasmodium falciparum* biology, including parasite genetics, erythrocyte invasion and modification, drug resistance, and the development of new vaccine and antimalarial approaches.

Alex Loukas FASP has been awarded an NHMRC Investigator Grant (level 3) at James Cook University titled "Helminth secreted proteins as vaccines, diagnostics and therapeutics" to develop vaccines and diagnostics for helminth infections as well as the development of genetically engineered parasitic worms as a novel platform to deliver therapeutic proteins.

Katherine Andrews FASP has been awarded an NHMRC Investigator Grant (level 2) at Griffith University titled "Diversifying the malaria drug discovery pipeline to combat drug resistance" to develop new antimalarial candidates and identify novel drug targets.

Robert Poulin FASP retired from the University of Otago at the end of July after leading the Evolutionary and Ecological Parasitology group from 1992–2026. He was awarded Emeritus Professor status and will continue independent research with collaborators.

Four new ASP Fellows elected in 2026: **Diane Barton, Brian Cooke, Katja Fischer and Terry Spithill.**

Katja Fischer FASP: in addition to being elected a Fellow this year, she received the 2026 Bridget Ogilvie Medal and is now ASP President-Elect.

State News continued

CiP2026 participants

Congratulations to participants who were each selected for Australian Society of Parasitology-funded places on the 2026 Concepts in Parasitology course; **Angelesa Runin** and **Anja Vermaak**.

This funding is from the Elsevier and IJP Disadvantaged Researcher Award Scheme.

International ASP Member news

Dr **Sheila Donnelly** University of Gallway recently used the ASP Parasite-VR experience at the National Ploughing Championships.

Professor **John Dalton** and his research team, had a stand where they shared all things parasitology, including the VR experience and it went down very well with young and old alike!



Image ASP Parasite-VR experience at the National Ploughing Championships in Screggan, Tullamore, County Offaly, Ireland (note, not raining)

From the Archives:

ASP Fellow, Marshall Lightowlers is sorting through his vast collection of photos from past ASP events which will soon be deposited in the ASP Archive.

This photo (right) from 1996 shows two ASP parasitologists from UTS; Georgina Whitworth (left) who did honours with John Ellis and Sian Munro (right) who did honours and PhD with Alan Johnson, both researching toxoplasma.



Image (above) Georgina Whitworth and Sian Munro copyright Marshall Lightowlers 1996.

Image (below) Haylee Weaver at the ASP Archive, copyright Lisa Jones 2025)

Archiving Policy and Forms

The Australian Society for Parasitology (ASP) maintains an archive to preserve records of enduring historical, administrative, scientific, and cultural value. The Archive supports continuity, institutional memory, scholarly research, and the public record of the Society's activities.

The Archive comprises hard-copy and digital records that document the work of the Society and its members in an ASP context. Suitable records may include governance and management records, conference materials, relevant correspondence, newsletters, committee papers, photographs, posters, oral-history materials, award records, publicity materials, and selected research-related records where they document ASP activity or the development of parasitology in Australia.

The Archive policy, and its accompanying legal and compliance appendix, applies to material donated or transferred by members, office-bearers, committees, event organisers, and related contributors. The Archive Policy and Transfer Form can be downloaded from the ASP website

https://www.parasite.org.au/the-society/archive/



Para-Site

PARA-SITE: an electronic guide to parasitology

Welcome to "PARA-SITE: an electronic guide to parasitology"

ISBN 978-1-74272-501-7

Produced as an educational initiative of the Australian Society of Parasitology (ASP), The University of Queensland (UQ), and the Australian Biological Resources Study (ABRS). Developed and written by Professor Peter O'Donoghue, Faculty of Science, The University of Queensland, Brisbane, Australia [p.odonoghue@uq.edu.au]

PARA-SITE provides basic information about parasites causing disease in animals and people. It covers information on:

parasite morphology (fundamental to taxonomy);

host range (species specificity);

site of infection (tissue/organ tropism);

parasite pathogenicity (disease potential);

modes of transmission (spread of infections);

differential diagnosis (detection of infections); and

treatment and control (cure and prevention).

The resource is available on-line through the website

https://parasiteguide.com/

https://www.parasite.org.au/publications/parasite/

The material contained in PARA-SITE is provided free of copyright to facilitate the broadest possible distribution amongst users.

Enjoy!







Outcome of the bid to host 17th International Congress of Parasitology 2030



The Australian Society for Parasitology congratulates the Malaysian Society of Parasitology and Tropical Medicine on being selected to host International Congress of Parasitology – ICOPA 2030 in Kuching, Sarawak, Malaysia.

While the ASP are naturally disappointed not to be welcoming the world to Sydney, we are immensely proud of our bid and grateful to everyone who supported us throughout this journey.

Thank you to the World Federation of Parasitologists, our bid ambassadors, supporters, partners and colleagues from around the world who took the time to meet with us in Montréal.

We were proud of Australia's bid to host the 16th International Congress of Parasitology (ICOPA 2030), led by The Australian Society for Parasitology (ASP) and bringing together Australia's world-leading parasitology, infectious diseases, veterinary science and global health communities in support of this opportunity.



At the heart of our bid was a shared ambition to create a truly global congress to advance scientific discovery, strengthen international collaboration and accelerate progress towards a world less burdened by parasitic diseases. Sydney's bid was brought to life through a unique visual identity inspired by connection, discovery and the interconnected nature of parasites, hosts, ecosystems and communities. Our ICOPA 2030 artwork was created by Indigenous artist Bernard Lee Singleton and is inspired by the concept "Mundu Guri Dijana-y" ("Our spirit is standing well"). This work celebrates the connection between people, health and Country, reflecting the belief that caring for the environment supports our collective wellbeing. Through traditional patterns and cultural symbolism, the design expresses healing, connection and the shared commitment to creating a healthier future for communities around the world. The design reflects Sydney as a place where the world's parasitologists can come together to exchange knowledge, challenge ideas and build new partnerships.

Our bid was led by ASP researchers from Australia's universities and institutes who have a strong commitment to global collaboration, and Sydney offers an inspiring and inclusive setting for ICOPA. We look forward to joining you all in Sarawak in 2030 and continuing to strengthen our global parasitology community together.

On behalf of the bid co-chairs, Professor Kevin Saliba and Professor Shokoofeh Shamsi, and the amazing ICOPA XVII bid team (pictured left).

HERMINTHOLOGY

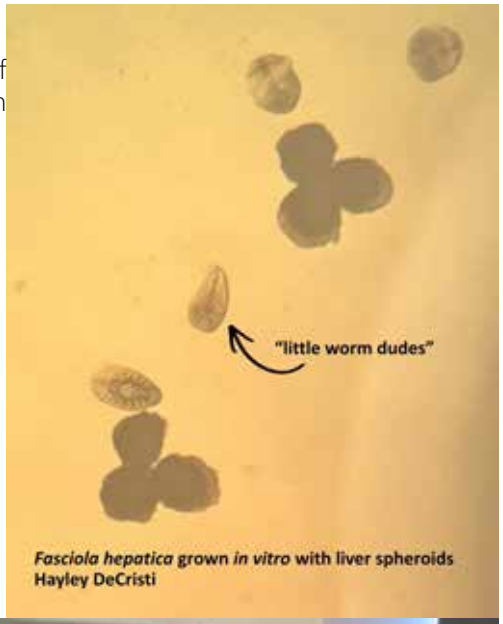
"The mysteries surrounding the drivers of Fasciola hepatica's early development within the host and how they evade the host immune system has kept me peering down the microscope wanting to find out more."

Hayley Martinez DeCristi
MPhil Candidate
University of Sydney, Australia

Hayley DeCristi, from Florida, USA, has always known she wanted to dedicate her career to the fields of animal science and health. Prior to pursuing research, she immersed herself in the animal care industry, gaining valuable hands-on experience in a kennel for three years and worked as a veterinary technician for one year, honing her skills and deepening her understanding of animal care.

In 2024, Hayley travelled to Australia to undertake a volunteer research internship at the University of Sydney hosted by The Education Abroad Network (TEAN). During this time, she assisted an AVBS honours student investigating *Fasciola hepatica* drug resistance as part of the 'Beyond Suspicion' project. She learnt the foundational parasitology lab skills of conducting coprological ELISAs and faecal PCRs to validate traditional diagnostics (sedimentation and faecal egg count) pre- and post-drug treatment. It was during this internship that she fell in love with the research side of science and enjoyed how animal welfare was still deeply intertwined with it. Not only did this lead to Hayley's first scientific publication, but it has also led to her current status as a MPhil student continuing her research of *F. hepatica*. You can read Hayley's co-first author paper "Challenges in applying W.A.A.V.P. criteria to diagnosing triclabendazole resistance in *Fasciola hepatica,* an example from the Southern Tablelands of New South Wales, Australia" published in the International Journal for Parasitology: Drugs and Drug Resistance.

Unsurprisingly, *Fasciola hepatica is* her favourite parasite due to her experience in the field. The more she learns about these "little worm dudes", the more intrigued she is by their remarkable biology. The mysteries surrounding the drivers of their early development within the host and how they evade the host immune system has kept her peering down the microscope wanting to find out more.



***Fasciola hepatica* grown *in vitro* with liver spheroids**
Hayley DeCristi



HERMINTHOLOGY


Native lymnaeid snail – Austropeplea sp.
Priscilla Huynh

among fellow scientists and curiosity about parasitology in the broader community."

She is currently undertaking her PhD at the University of Sydney, where she continues to study her favourite parasite, the liver fluke, through cell culture to investigate the mechanisms of resistance to the frontline drug triclabendazole. Priscilla's firsthand experiences of working closely with producers impacted by fasciolosis and growing drug resistance continues to be a major source of motivation, helping to drive her research through the challenges, uncertainties, and rewards of a scientific career.

"Through niche parasitology humour and cute visuals, I hope to spark both laughter among fellow scientists and curiosity about parasitology in the broader community."

Priscilla Huynh
PhD Candidate (1st Year)
Univeristy of Sydney, Australia

Priscilla Huynh is a PhD student in the Sydney School of Veterinary Science at the University of Sydney, Australia. Her journey into parasitology began with what was intended to be a brief, ten-day research placement undertaken as a compulsory component of her Bachelor of Science (Animal and Veterinary Bioscience) degree at The University of Sydney. During this placement, she was fortunate enough to gain a broad experience as she spent half her time undertaking field work for a liver fluke *(Fasciola hepatica)* drug resistance trial and the other half processing the collected samples in the lab. It quickly became clear that Priscilla had been bitten by the parasitology bug, inspiring her to continue expanding her knowledge and laboratory skills within the University's parasitology research group. In 2025, she completed an Honours project investigating the seasonality of the intermediate snail hosts of liver fluke in the Southern Tablelands of New South Wales, Australia. The hands-on lab work, bimonthly field trips, a research exchange at the University of Melbourne, and excitement of undertaking real-world research ultimately led her to pursue a career in parasitology. These experiences also rekindled her creative side, leading to the creation of playful parasitology themed art posted under the Instagram doodle. scholar



"Through niche parasitology humour and cute visuals, I hope to spark both laughter

HERMINTHOLOGY

"I want to make science clear, engaging, and meaningful for the next generation."

Hira Muqaddas
Assistant Professor
The Women University Multan, Pakistan

EQUIP 2026 scholar recipient for #ICOPA2026, Assistant Professor Hira Muqaddas Ph.D. from Pakistan. Hira teaches protozoology and helminthology at The Women University Multan, Punjab. Her interest in parasitology began during post-mortem examinations, where she discovered a remarkable variety of helminths and was fascinated by their different shapes, morphology, and preferred locations within the host. In 2021, Hira became the first woman in her family to complete a PhD and pursue a career in STEM. While reviewing the literature, she realized that very few researchers in Pakistan were studying helminths. Instead of seeing this as a limitation, she saw an opportunity. She stepped into livestock research, a field in which women are often underrepresented, and continued working despite the practical and social challenges during sampling. Her doctoral research focused on the highly endemic parasite Echinococcus granulosus, which became her favourite because of its complex life cycle, One Health importance, and serious effects on both human and animal health. Today, her research focuses on the molecular diagnosis and phylogeographic analysis of gastrointestinal helminths in livestock.

Hira is equally passionate about supporting women in science. She established the first women-led "One Health laboratory" dedicated to helminthology in her region, creating a space where female researchers can learn, lead, and grow. She also enjoys taking science beyond the laboratory. Through activity-based lessons and an illustrated storybook, Hira teaches children about zoonotic diseases and safe interactions with companion animals. Her goal is simple: to make science clear, engaging, and meaningful for the next generation.

Hira's ICOPA2026 poster was titled "Key Molecular Findings on G3 Genotype of Echinococcus granulosus s. in Cystic Echinococcosis: An Emerging Risk Factor in Pakistan"



Oesophagostomum columbianum: Corona radiata at the cephalic end
Hira Muqaddas

View all of the Herminthology profiles on their Facebook page https://www.facebook.com/herminthology



JOBS

PhD opportunity at UQ

Work with Dr Hannah Siddle, Queensland Alliance for Agriculture and Food Innovation "Investigating genetic drivers of chemical resistance in cattle ticks"

This is an Australian Research Council funded project to investigate the molecular mechanisms driving chemical resistance in cattle ticks which supports a 3.5 year PhD program. There is opportunity to gain further work experience by extending the PhD to 4 years to enable an industry placement during the degree.

Ticks are a significant burden on global agriculture, acting as vectors for tick borne pathogens, affecting livelihoods and global food security.

Chemical treatments are the only method of control, but these chemicals are not environmentally sustainable, and ticks are adapting and building resistance, an immediate problem that requires urgent and effective solutions.

Current tests for chemical resistance are slow and require laboratory facilities leading to inappropriate use of chemicals, driving further resistance.

This project will collect ticks from the field and deep sequence the genomes of susceptible and resistant ticks to identify the genetic changes driving resistance. This information will be used to develop flexible molecular tests for resistance.

Find out more and apply:

https://study.uq.edu.au/study-options/phd-mphil-professional-doctorate/projects/investigating-genetic-drivers-chemical-resistance-cattle-ticks

Research Officer @ UNSW

Research Officer (Immunology/ Vaccinology) - Molecular Medicine

The Research Officer (Immunology / Vaccinology) contributes to innovative malaria vaccine research within the Baum Laboratory, School of Biomedical Sciences at UNSW. The role provides specialised technical and research support to the laboratory's malaria vaccine development program, focusing on the identification, design and evaluation of novel vaccine targets aimed at preventing malaria infection and advancing future therapeutic interventions.

Find out more and apply

https://external-careers.jobs.unsw.edu.au/cw/en/job/544043/research-officer-immunologyvaccinology-molecular-medicine

UNSW Scientia PhD Scholarship Scheme

Malaria remains a major global health challenge, creating an urgent need for effective vaccines and antibody-based interventions. In our lab we aim to discover novel surface antigens of the malaria parasite that induce protective immune responses and provide targets for next-generation vaccines, monoclonal antibodies and other immunotherapies.

This UNSW Scientia PhD project will combine advanced immunology, parasitology and high-throughput antigen-screening approaches, investigating how parasite proteins interact with antibodies and immune cells, assessing their potential to induce protective responses, and prioritising targets for vaccine/ therapeutic development.

The project includes partnership with Ehime University, Japan, a centre for malaria protein production and screening technology, with an international research placement providing specialist training and insight into translational vaccinology.

As the most prestigious PhD studentship available at UNSW, we are seeking truly exceptional applicants with a passion for infectious disease research and vaccine design, preferably with a relevant Masters degree, publications and/or other evidence of distinction

Find out more and how to apply
https://www.unsw.edu.au/research/hdr/our-projects/next-generation-malaria-vaccine-targets

www.parasite.org.au/jobs/

3rd Aotearoa Aquatic Diseases Symposium (AADS) 17-19th March 2027

Aotearoa Aquatic Diseases Symposium

Ngā Mate Aquatic O Aotearoa

SYMPOSIUM CALL FOR REGISTRATIONS & PHOTO COMPETITION

3rd Aotearoa Aquatic Diseases Symposium (AADS) 17-19th March 2027 hosted by the Cawthron Institute in Nelson, New Zealand.

https://events.humanitix.com/aotearoa-aquatic-diseases-symposium

Venue: Nelson's Trafalgar Centre, 111 Haven Road, within easy walking distance of all Nelson city accommodation.

What: All-inclusive registration fee (morning-tea, lunch, evening cocktail events) and access to all invited lectures and contributed presentations.

Plenary speakers: Plenary speakers to be announced soon!

Organising committee: Kate Hutson, Ian Davidson, Patrick Cahill, and Jennifer Hume (Cawthron), Henry Lane (Earth Sciences NZ), Jerusha Bennett (University of Otago), Wendi Roe (Massey University), Chris Niebuhr (Bioeconomy Science Institute) and Zac Waddington (New Zealand King Salmon).

Our symposium has a positively electric vibe and has attracted strong attendance from more than 30 organisations. Our pre-symposium workshop – Aquatic Diagnostics & Histopathology – has been designed specifically for those aiming to increase their technical skills in sampling techniques and to build a foundation in diagnostic methods. Register for the workshop

The 3rd AADS provides a forum where people from academia, government and industry can share insights into aquatic health and diseases. The symposium encourages broad perspectives including the rapidly changing landscape of aquatic disease emergence, challenges to our biosecurity, the role of Mātauranga Māori and the future safeguard of people, environment, wildlife, and seafood industries. The meeting will feature plenary talks, thematic sessions, a satellite histopathology workshop, and networking events, with a strong focus on integrated approaches to understanding and managing health and disease at wildlife, livestock, human, and environmental interfaces. Attendees can enjoy the wonderful Nelson-Tasman region as part of their visit, including the Abel Tasman National Park and Marlborough Sounds within easy reach.

We invite presentations and submission of Abstracts on a diversity of topics including, but not limited to:

• Evolution and ecology of aquatic wildlife diseases (e.g., aquatic mammals, seabirds, amphibians, fishes, aquatic invertebrates)

• One Health and vector-borne diseases (e.g., seafood safety, harmful algal blooms, seafood allergy, mosquito-borne diseases)

• Aquaculture, commercial and customary fishery health (e.g., salmonids, fish, shellfish, crustaceans)

• Aquatic surveillance, epidemiology, diagnostics, vaccines, treatments, policy, biosecurity, and management

• Aquatic health from mātauranga Māori, social science, livelihoods, and Pacific nation perspectives.

Enter our photo competition! The winner will have their image printed on the 3rd AADS symposium programme and will receive free registration!

To enter: email your high-quality image to aads@cawthron.org.nz. You can enter as many times as you wish. Conditions of entry: Entrants must have registered to either the 3rd AADS pre-workshop or symposium to enter. All entrants agree their submitted images may be used by the AADS in promotional materials. The winning photo will be printed on the cover of the 3rd AADS. Photos must be an original portrait photograph, taken by the submitter and in original form (unedited). Photos will be judged by the AADS organising committee. Photos will be assessed for composition, relevance to the symposium theme or region and the adaptability/suitability of the image as the cover of the 3rd AADS programme (e.g., high resolution, subject positioning). The winner must attend either the workshop and/or symposium in March 2027 to be reimbursed the registration fee. Only the symposium registration fee will be reimbursed for entrants attending both the workshop and the symposium.

Abstract Submission by 18th December 2026.

Expressions of interest are sought for oral presentations. Contributing presenters will be allocated an oral presentation of 12 mins. Please email your Abstract to: aads@cawthron.orgn.nz

Questions or more information

If you have any questions about this event, please feel free to contact Kate Hutson kate.hutson@cawthron.org.nz or contact us via the conference email address aads@cawthron.org.nz



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