**Cielo Pasay Curriculum Vitae**

**PART 1**

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| **1a. Personal details** |
| **Full name** | *Title*Dr. | *First name*Cielo | *Second name(s)* | *Family name*Pasay |
| **Present position** | Research Officer |
| **Organisation/Employer** | ADF MIDI/QIMR Berghofer Medical Research Institute |
| **Contact Address** | Weary Dunlop Drive, Gallipoli Barracks |
| Enoggera, QLD  |
| Australia | **Post code** | 4051 |
| **Work telephone** | +61 7 3362 0410 | **Mobile** | +61 452228761 |
| **Email** | cielo.pasay1@defence.gov.au; Cielo.Pasay@qimrberghofer.edu.au |
| **Personal website (if applicable)** | NA |

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| **1b. Academic qualifications** |

1997- Ph.D. in Tropical Health (Molecular Parasitology), University of Queensland – School of Population Health, Brisbane, Australia

1993 – MSc. in Public Health (ImmunoParasitology), University of the Philippines – College of Public Health, Manila, Philippines

1981 – BSc. in Public Health, University of the Philippines – College of Public Health, Manila, Philippines

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| **1c. Professional positions held** |

2020- PRESENT. Research Officer, Australian Defence Force Malaria and Infectious Disease Institute (ADF MIDI) and QIMR Berghofer Medical Research Institute

2002-2019 Research Officer, Clinical Tropical Medicine, QIMR Berghofer

2013-2014 Research Officer (Part time), Australian Defence Force (ADF)-MIDI

2019- Sessional Academic, Queensland University of Technology (QUT) and ACU

2017- Sessional Academic, Australian Catholic University (ACU)

1997-2001 Head, Molecular Biology Unit and Head, Department of Parasitology and Medical Entomology, Research Institute for Tropical Medicine (RITM), Manila Philippines

1986-1996 Supervising Science Research Specialist, Department of Parasitology and Medical Entomology, Research Institute for Tropical Medicine (RITM), Manila Philippines

1981-1985 Senior Research Assistant, University of the Philippines, College of Public Health, Manila, Philippines

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| **1d. Present research/professional speciality** |

Dr Cielo Pasay has extensive experience in infectious disease research such as malaria, scabies and arboviruses. She specializes in molecular biology, molecular epidemiology, diagnostics and drug resistance.

At ADF MIDI, Dr. Pasay is currently working on arbovirus surveillance projects in countries within the Pacific Command Region. She performs multiplex assays to detect mosquito-borne viral pathogens by qPCR and viral antibodies against viruses of interest (Dengue, JEV, RRV and BFV) by Luminex bead-based assays. She performs the assays on blood samples collected from Defence staff from Pacific countries to determine presence of arbovirusus where ADF personnel can be deployed. The goal is to identify hot spots in the PACOM region where a threat of arboviruses outbreak may occur. Test results also aim to guide Forced Health Protection Managers regarding preventative approaches against arboviruses to ensure the health and safety of ADF staff.

Dr. Cielo Pasay’s current malaria research focuses on the global surveillance of HRP gene deletions of malaria parasites, a protein that is detected by Rapid Diagnostic Tests (RDTs). The goal is to identify malaria endemic regions (using state-of- the- art molecular biology assays such multiplex qPCRs and digital PCRs) in the world where HRP-based RDTs must be changed to other RDTs to prevent misdiagnosis; that may lead to serious illness or death. In the past, she has also conducted research on malaria vector control demonstrating the efficacy of ivermectin, used as endectocides in experimental pigs, against *Anopheles farauti*, a dominant mosquito vector in the Pacific countries. She has likewise shown the use of Near-Infrared Spectroscopy (NIRS) and Mid-Infrared Spectroscopy (ATR-FTIR) as rapid and cost-effective method that allows high throughput screening of malaria-infected vector mosquitoes.

Her current scabies research focuses on improving the diagnosis of scabies. She has developed a highly sensitive and specific probe based qRT-PCR assay with a new target sourced from recently published scabies genomes generated by next generation sequencing technology. Her new PCR test performs well with samples collected by a non-invasive sample collection tool (FLOQ swab). A highly sensitive and specific qRT-PCR will greatly improve scabies diagnosis leading to better treatment and clinical care, improved epidemiologic studies, and facilitates clinical trials of new acaricides. This new qPCR test along with swab collection of samples from skin lesions is currently in use in a scabies prevalence surveys in Auckland, New Zealand and the Pacific

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| **1e. Total years research experience** | 42 years |

Career disruption: 2014, 2015 (breast and kidney cancer, all clear now)

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| **1f. Professional distinctions and memberships (including honours, prizes, scholarships, boards or governance roles, etc)** |

2017- Current Member, International Alliance for the Control of Scabies (IACS)

2002- Current Member, Australian Society for Parasitology (ASP)

1997- Current Member, American Society for Tropical Medicine and Hygiene (ASTMH)

1994-1997 Australian NHMRC PhD Scholarship

1991-1993 SEAMEO-TROPMED Scholarship MSc Scholarship

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| **1g. Total number of *peer reviewed* publications and patents** | Journal articles | Books | Book chapters, books edited | Conference proceedings | Patents |
| 41 |  | 1 | 21 |  |

**PART 2**

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| **2a. Research publications and dissemination**  |

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| Peer-reviewed journal articles |
| 1. Gatton ML, Smith D, **Pasay C**, Anderson K, Mihreteab S, Valdivia HO, Sanchez JF, Beshir KB, Cunningham J, Cheng Q. Comparison of prevalence estimates of pfhrp2 and pfhrp3 deletions in Plasmodium falciparum determined by conventional PCR and multiplex qPCR and implications for surveillance and monitoring. Int J Infect Dis. 2024 Jul;144:107061. doi: 10.1016/j.ijid.2024.107061. Epub 2024 Apr 16. PMID: 38631508.
2. Agaba BB, Smith D, Travis J, **Pasay C**, Nabatanzi M, Arinaitwe E, Ssewanyana I, Nabadda S, Cunningham J, Kamya MR, Cheng Q. Limited threat of Plasmodium falciparum pfhrp2 and pfhrp3 gene deletion to the utility of HRP2-based malaria RDTs in Northern Uganda. Malar J. 2024 Jan 2;23(1):3. doi: 10.1186/s12936-023-04830-w. PMID: 38167003; PMCID: PMC10759665.
3. Thornley S, Sundborn G, Engelman D, Roskvist R, Pasay C, Marshall R, Long W, Dugu N, Hopoi N, Moritsuka S, McCarthy J, Morris AJ. Children's scabies survey indicates high prevalence and misdiagnosis in Auckland educational institutions. J Paediatr Child Health. 2023 Dec;59(12):1296-1303. doi: 10.1111/jpc.16512. Epub 2023 Nov 2. PMID: 37920140.
4. Valdivia HO, Anderson K, Smith D, **Pasay C**, Salas CJ, Braga G, Lucas CM, Lizewski SE, Joya CA, Kooken JM, Sanchez JF, Cheng Q. Spatiotemporal dynamics of Plasmodium falciparum histidine-rich protein 2 and 3 deletions in Peru. Sci Rep. 2022 Nov 18;12(1):19845. doi: 10.1038/s41598-022-23881-8.

PMID: 364008061. Thornley S, Sundborn G, Engelman D, Roskvist R, Heather M, **Pasay CJ**, Marshall R, McCarthy J. High prevalence of scabies in Auckland pre-schools.

N Z Med J. 2022 Aug 19;135(1560):12-17.PMID: 359997951. Mihreteab S, Anderson K, **Pasay C**, Smith D, Gatton ML, Cunningham J, Berhane A, Cheng Q. Epidemiology of mutant Plasmodium falciparum parasites lacking histidine-rich protein 2/3 genes in Eritrea 2 years after switching from HRP2-based RDTs.Sci Rep. 2021 Oct 26;11(1):21082. doi: 10.1038/s41598-021-00714-8.PMID: 34702923
2. Lena Chng, Deborah C. Holt, Matt Field, Joshua R. Francis, Dev Tilakaratne, Milou H. Dekkers, Greg Robinson, Kate Mounsey, Rebecca Pavlos, Asha C. Bowen, Katja Fischer, Anthony T. Papenfuss, Robin B. Gasser, Pasi K. Korhonen, Bart J. Currie, James S. McCarthy, **Cielo Pasay.** Molecular diagnosis of scabies using a novel probe-based polymerase chain reaction assay targeting high-copy number repetitive sequences in the Sarcoptes scabiei genome. (2021). PLoS Negl Trop Dis (<https://doi.org/10.1371/journal.pntd.0009149>)
3. Watts RE, Odedra A, Marquart L, Webb L, Abd-Rahman AN, Cascales L, Chalon S, Rebelo M, Pava Z, Collins KA, **Pasay C**, Chen N, Peatey CL, Möhrle JJ, McCarthy JS. Safety and parasite clearance of artemisinin-resistant *Plasmodium falciparum* infection: A pilot and a randomised volunteer infection study in Australia.PLoS Med. 2020 Aug 21;17(8):e1003203. doi: 10.1371/journal.pmed.1003203. eCollection 2020 Aug.PMID: 32822347
4. ***Cielo J. Pasay***, Laith Yakob, Hannah R. Meredith, Romal Stewart, Paul C. Mills, Milou H. Dekkers, Oselyne Ong, Stacey Llewellyn, Leon Hugo, James McCarthy and Gregor J. Devine (2019) Treatment of pigs with endectocides as a complementary tool for combating malaria transmission by *Anopheles farauti s.s.* in Papua New Guinea. Parasites and Vectors 12:124.
5. Karryn Gresty, Karen Anderson, ***Cielo Pasay***, Norman Waters, and Qin Cheng (2019) Polymorphisms in *P. falciparum* Kelch13 and *P. vivax* Kelch12 genes in parasites collected from three South Pacific countries prior to extensive exposure to artemisinin combination therapies. Antimicrobial Agents and Chemotherapy (doi:10.1128/AAC.00536-19)
6. Hui Xing, Sevan D. Houston, Xuejie Chen, Sussan Ghassabian, Tyler Fahrenhorst-Jones, Andy Kuo, Cody-Ellen P. Murray, Kyna-Anne Conn, Kara N. Jaeschke, Da-Yun Jin, **Cielo Pasay**, Paul V. Bernhardt, Jed M. Burns, John Tsanaktsidis,G. Paul Savage, Glen M. Boyle, James J. De Voss, James McCarthy, Gimme H. Walter,Thomas H. J. Burne, Maree T. Smith, Jian-Ke Tie and Craig M. Williams (2019) Cyclooctatetraene: A Bioactive Cubane Paradigm Complement. Chemistry European Journal 25, 2729-2734.
7. Pawliw R, Farrow R, Sekuloski S, Jennings H, Healer J, Phuong T, Sathe P, ***Pasay C***, Evans K, Cowman A, Schofield L, Chen N, McCarthy J and Trenholme K. (2018) A bioreactor system for the manufacture of genetically modified *P. falciparum* blood stage malaria cell bank for use in a clinical trial. Malaria Journal 17:283
8. Chalmers BA, Xing H, Houston S, Clark C, Ghassabian S, Kuo A, Cao B, Reitsma A, Murray CE, Stok JE, Boyle GM, Pierce CJ, Littler SW, Winkler DA, Bernharddt PV, **Pasay C,** De Voss JJ, McCarthy J, Parson PG, Walter GH, Smith MT, Cooper HM, Nilsson SK, Tsanaktsidis J, Savage GP, Williams CM. (2016) Validating Eaton’s hypothesis: cubane as a benzene bioisostere. Angew Chem Int Ed Engl 7; 55(11):3580-5.
9. Griffin P\*, ***Pasay C\****, Elliott S, Sekuloski S, Sikulu M, Hugo L, Khoury D, Cromer D, Davenport M, Sattabongkot J, Ivinson K, Ockenhouse C, McCarthy J. (2016) Safety and reproducibility of a clinical trial system using induced blood stage *P. vivax* infection and its potential as a model to evaluate malaria transmission. PLoS Negl Trop Dis 10 (12): e0005139. **(\*equal first author)**
10. Wesley D\*, ***Pasay C***\*, Guintran JO, Iata H, Anderson K, Nausien J, Gresty KJ, Waters NC, Vestergaard LS, Taleo G, Cheng Q. (2016) The utility of malaria rapid diagnostic tests as a tool in enhanced surveillance for malaria elimination in Vanuatu. PLoS ONE 11(11): e0167136 (\***equal first author)**
11. ***Pasay CJ***, Rockett R, Sekuloski S, Griffin P, Marquat L, Peatey C, Wang CY, O’Rouke P, Elliott S, Baker M, Mohrle JJ, McCarthy JS. (2016) Piperaquine monotherapy of drug sensitive P. falciparuminfection results in rapid clearance of parasitemia but is followed by the appearance of gametocytemia. J Infect Dis*.* Apr 7. pii: jiw 128.
12. Grigg MJ, William T, Menon J, Dhanaraj P, Barber BE, Wikes CS, von Seidlein L, Rajahram GS, ***Pasay C,***McCarthy JS, Price RN, Anstey NM, Teo TW. (2016) Artesunate-mefloquine versus chloroquine for treatment of uncomplicated *P. knowlesi* malaria in Malaysia (ACT KNOW): an open-label, randomized controlled trial. Lancet Infect Dis16 (2):180-8.
13. Britton S, Cheng Q, Grigg MJ, Poole CB, ***Pasay C,*** William T, Fornace K, Anstey NM, Sutherland CJ, Drakeley C, McCarthy JS. (2016) Sensitive detection of *P. vivax* using a high-throughput colorimetric loop mediated isothermal amplification (Ht-LAMP) Platform: a potential novel tool for malaria elimination. PLoS Negl Trop Dis 12; 10 (2):e0004443.
14. Mounsey KE, Murray HC, Bielefedt-Ohmann H, **Pasay C,** Holt DC, Currie BJ, Walton SF, McCarthy JS (2015) Prospective study in a porcine model of Sarcoptes scabiei indicates the association of Th2 and Th17 pathways with the clinical severity of scabies. PLoS Negl Trop Dis. 2; 9 (3):e0003498.
15. Rampton M, Walton S, Holt D, **Pasay C,** Kelly A, Currie BJ, McCarthy JS, Mounsey KE.(2013) Antibody responses to Sarcoptes scabiei apolipoprotein in a porcine model: relevance to immunodiagnosis of recent infection. PLoS One 6; 8(6):e65354
16. **Pasay C**, Rothwell J, Mounsey K, Kelly A, Hutchinson B, McCarthy J. (2011) An exploratory study to assess the activity of the acarine growth inhibitor, fluazuron, against Sarcoptes scabei infection in pigs. Parasit Vectors 16; 5:40.
17. **Pasay C**, Mounsey K, Stevenson G, Davis R, Arlian L, Morgan, M, Vyszenski-Moher, D, Andrews K , McCarthy J. (2010) Acaricidal activity of eugenol-based compounds against scabies mites. PLoS ONE 5(8): e12079.
18. Mounsey KE\*, **Pasay CJ\***, Arlian LG, Morgan MS, Walton SF, McCarthy JS. (2010) Increased transcription of glutathione S-transferases in acaricide exposed scabies mites. Parasit Vectors 18; 3:43. (\*equal first author)
19. Mounsey K, Ho MF, Kelly A, Willis C, **Pasay C**, Kemp DJ, McCarthy JS, Fischer K. (2010) A tractable experimental model for study of human and animal scabies. PLoS Negl Trop Dis. 4(7):e756.
20. **Pasay C**, Arlian L, Morgan M, Gunning R, Rossiter L, Holt D, Walton S, Beckham S, McCarthy J. (2009) The effect of insecticide synergists on the response of scabies mites to pyrethroid acaricides. PLoS Negl Trop Dis. 3(1):e354.
21. **Pasay C,** Arlian L, Morgan M, Vyszenski-Moher D, Rose A, Holt D, Walton S, McCarthy J.( 2008). High-resolution melt analysis for the detection of a mutation associated with permethrin resistance in a population of scabies mites. Med and Vet Entomol. 22: 82-*88.*
22. **Pasay, C,** Walton, S, Fischer K, Holt D, Mc Carthy J. (2006). A PCR-based assay to survey for knockdown resistance to pyrethroid acaricides in human scabies mites (Sarcoptes scabiei var hominis). Am J Trop Med Hyg. 74(4), 649-657.
23. Belizario VY, **Pasay CJ**, Bersabe MJ, de Leon WU, Guerrero DM, Bugaoisan VM. (2005). Field Evaluation of malaria rapid diagnostic tests for the diagnosis of *P. falciparum* and non-*P. falciparum* infections. Southeast Asian J Trop Med Public Health. 36(3):552-561.
24. Chen N, Wilson D, **Pasay C,** Bell D, Martin L, Kyle D, Cheng Q. (2005). Origin and dissemination of chloroquine-resistant *P. falciparum* with mutant pfcrt alleles in the Philippines. Antimicrobial Agents Chemother. 49(5):2102-2105**.**
25. Chen N, Kyle DE, Pasay C, Fowler EV, Baker J, Peters JM, Cheng Q. (2003). Pfcrt allelic types with two novel amino acid mutations in chloroquine-resistant *P*. *falciparum* isolates from the Philippines. Antimicrobial Agents Chemother. 47(11):3500-5.
26. Torres EP, Ramirez BL, Salazar F, **Pasay MCJ**, Alamares JG, Santiago ML,

Hafalla JCR. (Aug 2001). Detection of bancroftian filariasis in human blood samples from Sorsogon province, the Philippines by polymerase chain reaction. Parasitology Research. 87(8): 677-679.1. Figtree M, *Pasay C*, Slade R, Cheng Q, Cloonan N, Walker J, Saul AJ. (2000).

*P. vivax* synonymous substitution frequencies, evolution and population structure deduced from diversity in AMA1 and MSP1 genes. Mol Biochem Parasitol, 108:53-66.30. **Pasay C**. (1999) Parasitological, immunological and molecular aspects of malaria  and its control in State-of-the-Art: Malaria Research in the Philippines.  a monograph by PCHRD/DOST, 61-72.1. Hafalla JC, Santiago ML, **Pasay CJ**, Gozar MG, Saul AJ, Kaslow DC. (1997). Minimum variation in the Pfs28 ookinete antigen detected in Philippine field isolates of *P. falciparum*. Mol Biochem Parasitol. 87:97-99.
2. Belizario VY, Saul AJ, Bustos DG, Lansang MA, **Pasay CJ,** Gatton M, Salazar NP. (1996). Field epidemiological studies on malaria in a low endemic area in the Philippines. Acta Tropica. 63:241-256
3. **Pasay CJ**, Cheng Q, Rzepczyk, Q, Saul A. (1995). Dimorphism of the C-terminus of *P. vivax* merozoite surface protein-1. Mol Biochem Parasitol 70, 217-219.
4. **Pasay CJ,** Bustos DG, Belizario VY, Lansang MA, Saul AJ. (1993). A longitudinal study of antibody levels in an area of low malaria endemicity using IFA Technique. Supplement to Am J Trop Med and Hyg. 49(3).249.
5. Salazar NP, **Pasay CJ,** Hugo, CT. (1991). Colonization and experimental infection of *Anopheles litoralis king*. Mosquito-Borne Disease Bulletin, 8 (3):81
6. Salazar NP, **Pasay CJ**, Renejane MS. (1991). Application of serological procedures in the diagnosis of invasive amoebiasis. Phil J Microbiol and Inf Dis. 20(2):50-53.
7. Salazar NP, **Pasay CJ**, Hugo CT, Renejane MS. (1990). Clindamycin

activity against *P. falciparum* gametocytes. Mosquito-Borne Disease Bulletin,7(1):73-78.1. Salazar NP, **Pasay CJ**, Sabordo NT, (1990). Detection of *E. histolytica* in routine stool examination. Phil J Microbiol Infect. Dis, 19 (2):57-60.
2. Salazar NP, Bustos DG, Sabordo NT, **Pasay, CJ**, Montalban CS, Laurente MC, Tarrayo MG. (1987). A model for the control of soil-transmitted helminthiasis, Phil J Microbiol Infect Dis. 16 (2):65-72.

**Conference presentations**1. Oral Presentation, “PCR Diagnostics for Scabies “,Parasites in the Pacific 2024 Conference (Joint ASP, NZSP and ICAP Annual meeting), 26-29 Aug 2024, University of Auckland, Auckland, New Zealand.
2. *Invited Speaker,* “PCR Diagnosis of Scabies”, Is scabies the key to unlocking the epidemic of rheumatic heart disease in Māori and Pasifika children? Symposium, 23 Feb 2024, University of Auckland, Auckland, New Zealand.
3. Poster Presentor, “Detection of P. falciparum hrp2 and hrp3 gene deletions by multiplex digital PCR” , Molecular Approaches to Malaria (MAM 2024), 18-22 Feb 2024, Lorne, Victoria, Australia.
4. Poster Presentor, “Lack of mutant *P. falciparum* parasites with *pfhrp2*and *pfhrp3* gene deletions in Anlong Veng and Kratie, Cambodia”, Annual Meeting of the American Society of Tropical Medicine and Hygiene (ASTMH), 18-22 October 2023, Hyatt Regency,Chicago, Illinois, USA.
5. Invited Speaker, “Diagnosis of scabies by qPCR”,Rheumatic Heart Disease and Scabies in Six Pacific Countries Symposium , 15-16,June 2023, Kingdom of Tonga.
6. *Invited Speaker*, “Developing a Diagnostic PCR for Scabies”, International Alliance for Scabies Control (IACS) 8th Global Meeting, 20 November 2019. MGM Ballroom Salon B, MGM National Harbor 101 MGM National Ave Oxon Hill, MD 20745, USA.
7. Poster Presentor, “ Improving the molecular diagnosis of scabies using a PCR assay targeting high copy number repeats identified in the parasite genome”, 68th Annual Meeting of the American Society of Tropical Medicine and Hygiene (ASTMH), 20-24 November 2019, Gaylord National Resort and Convention Center, National Harbor, Maryland, USA.
8. *Invited Speaker,* “PCR Diagnosis of Scabies”, Improving Scabies Treatment: a Path to Health Equity in New Zealand, 13 September 2019. University of Auckland, New Zealand.
9. *Invited Speaker*, “Developing a Diagnostic PCR for Scabies”, Hot North Skin Health Symposium, 14 August 2019, Menzies School of Health Research (MSHR), Darwin, Northern Territory
10. Poster Presentor, Endectocidal activity of ivermectin and moxidectin against *Anopheles farauti* in pigs” 1st Malaria World Congress, 1-5 July 2018, Melbourne, Australia**.**
11. *Oral Presentation* , Investigating the activity of the macrocyclic lactones ivermectin and moxidectin against malaria vectors” 66th Annual Meeting of the American Society of Tropical Medicine and Hygiene (ASTMH), 5-9 November 2017, Baltimore, Maryland, USA.
12. *Oral Presentation*, “Use of near-infrared spectroscopy (NIRS) to detect *Plasmodium sp* infection in vector mosquitoes” Australian Society for Parasitology (ASP) Annual Conference, 26-29 June 2017, Leura, Blue Mountains, NSW.
13. Poster Presentor, “The use of the induced blood stage malaria model to characterise the *in-vivo* transmission blocking activity of antimalarial drugs”. 63rd Annual Meeting of the American Society of Tropical Medicine and Hygiene (ASTMH), 2-6 November 2014, New Orleans, Louisiana, USA.
14. *Oral presentation*, “New therapies for the control of scabies”, Immunology and Infectious Diseases Seminar, QIMR Berghofer Central Auditorium , 13 February 2013
15. *Oral presentation*, “An exploratory study to assess the activity of Fluazuron, an acarine growth inhibitor against *Sarcoptes scabiei* in pigs” Australian Society for Parasitology (ASP) Annual Conference, 11-13 July, 2011, Cairns.
16. *Oral Presentation*, “Acaricidal activity of eugenol –based compounds against scabies mites”. XIIth International Congress of Parasitology (ICOPA) 15-20 August, 2010, Melbourne.
17. *Oral Presentation*, “, “Role of elevated transcription of Glutathione S-transferases (GSTs) in pyrethroid resistant scabies mites”. American Society of Tropical Medicine and Hygiene (ASTMH) Annual meeting, 18-22 November, 2009, Washington, DC, USA.
18. *Oral Presentation*, “Role of elevated transcription of Glutathione S-transferases (GSTs) in pyrethroid resistant scabies mites”. Australian Society for Parasitology (ASP) Annual Conference, 12-15 July, 2009, Sydney
19. *Oral Presentation*, “Investigating metabolic basis of permethrin resistance in scabies mites”. Scabies Workshop, 13-15 August, 2008. MSHR, Darwin, NT
20. *Poster Talk*, “Role of insecticide synergists in investigating metabolic basis of pyrethroid resistance in scabies mites”. Australian Society for Parasitology Annual Conference, 6-9 July, 2008. Adelaide
21. Poster Presentor, “Development of molecular and enzymatic assays to survey for permethrin resistance in scabies mites”. 56th Annual Meeting of the American Society of Tropical Medicine and Hygiene (ASTMH), 4-8 November 2007, Philadelphia, USA.
22. *Oral Presentation*, “High Resolution Melt (HRM) analysis for the detection of mutation associated with permethrin resistance in scabies mites”. Australian Society for Parasitology Annual Conference, 8-12 July, 2007. Canberra
23. Poster Presentor, “Identification of a point mutation in the voltage sensitive sodium channel gene (vssc) from permethrin-resistant dog mites (*Sarcoptes scabiei var canis*)”, 2006 Australian Society for Parasitology and ARC/NHMRC Research Network for Parasitology Annual Conference, 2-5 July 2006, Gold Coast, QLD.
24. Poster Presentor, “A PCR-based assay to survey for knockdown resistance to pyrethroid acaricides in human scabies mites”, 54th Annual Meeting of the American Society of Tropical Medicine and Hygiene (ASTMH), December 11-15, 2005, Hilton Hotel ,Washington, DC, USA.
25. *Oral Presentation*, “Investigating the molecular basis of drug resistance in human scabies”, Menzies School of Health Research, (Institute Seminar), 30 June 2005, Darwin, Northern Territory, Australia.
26. Poster Presentor, “ *P. falciparum* malaria in the Philippines: resistance to chloroquine by *in-vivo* and molecular methods”, 50th Annual Meeting of the American Society of Tropical Medicine and Hygiene (ASTMH), November 10-15, 2001, Hilton Hotel ,Atlanta, Georgia USA.
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| Peer reviewed books |
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| Peer reviewed book chapters, books edited |
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| Refereed conference proceedings |
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| Patents |
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| Other forms of dissemination (reports for clients, technical reports, popular press, etc) |
| * + George Zaidan’s Pocket Science Episode 14 featured this paper. (<http://www.youtube.com/user/georgezaidan#p/u/12/5iOZQwCVOl8>
	+ QIMR Berghofer media release “ Clove oil for itchy rash” (9 September 2010)
	+ QIMR Berghofer LifeLAB “ Clove oil soothes itching” ( issue 79: November 2010, p6)
	+ International Pest Control, “New compounds against scabies” vol 52: no.5, Sept/Oct 2010, p249.
	+ Study on Clove Oil featured in *Healthy Woman from Bottom Line* and *Daily Health News* (New York City) (2011)
	+ Study on Clove Oil was posted by a member of *Scabies Forum* and members tried to use it in resistant scabies where current topical creams failed. (They testified it worked for them and sent me very grateful emails)
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