



UNIVERSITI
MALAYA

DEPARTMENT OF PARASITOLOGY FACULTY OF MEDICINE NEWSLETTER 2024



The Department of Parasitology, Faculty of Medicine, Universiti Malaya is a very active department managed by **27** staff members. Among these members, **19** are lecturers (including 2 honorary professors). The department plays critical roles in teaching, research and diagnostic services. The department has contributed its teaching services to various programs offered by the Faculty of Medicine such as the Bachelor of Medicine, Bachelor of Surgery (MBBS), Bachelor of Nursing Science, Bachelor of Biomedical Science, Master of Pathology (MPath), as well as external elective course for students from other faculties in the university. Besides, the department has provided teaching service via laboratory postings for Diploma program in Medical Laboratory Technology by University Malaya Medical Centre (UMMC). In addition, the department has launched a one-year master program by coursework (Master of Medical Parasitology and Entomology) in 2022. On top of that, this department is highly active in research, securing various research grants and producing impactful research outputs through the years. It is also the hub of several well-respected and impactful scientists, with 4 of its academic staff being the Stanford/Elsevier's top 2% scientists worldwide in 2024. The department has groomed many scientists via its MSc and PhD programs (research mode), as well as various workshops organized by the department. To date, this department has produced numerous local and overseas talents. In line with the vision of Universiti Malaya, the department strives to be the centre of excellence for research, innovation, publication and teaching in medical parasitology and entomology.



FOREWORD BY THE HEAD OF DEPARTMENT

Prof. Dr. Lau Yee Ling



First and foremost, I would like to express my gratitude to Dr. Lee Wenn Chyau and his team for the preparation of this year's newsletter. The Department of Parasitology, Faculty of Medicine, Universiti Malaya is committed to provide excellent education to our students and conduct research that will benefit our communities. Through the years, the department has groomed hundreds of talents for the fields of healthcare and life sciences for the academia, as well as other related industries. The department has been consistently ranked among the top three departments in the faculty for research publications. Members within the department have tried their best to contribute to the academia and the community. Notably, our students and academic staff have won multiple local and international research awards for their remarkable work. In addition, we have launched our new Master in Medical Parasitology and Entomology Program that is offered to local and international students intended to deepen their knowledge and research skills in modern tropical medicine. Our research activities cover various aspects of Parasitology such as protozoa, nematodes, medically important arthropods, and vector control, with emphasis on both modern and traditional tropical medicine. In year 2023, the department produced the highest number of publications per staff among all departments (pre/para-clinical) in the Faculty of Medicine, Universiti Malaya. We will try our best to improve ourselves to achieve higher and contribute more to the nation.



Academic staff

Prof. Datin Dr. Indra Vythilingam

Honorary Professor

Datin Dr Indra Vythilingam is a Professor at the Department of Parasitology, Faculty of Medicine, University of Malaya (UM). She has been with the Department since September 2011. Prior to that, she worked at the Institute of Medical Research (IMR), Malaysia and the Environmental Health Institute, Singapore. At UM, she was instrumental in designing and seeing through the establishment of the Arthropod Containment Level 2 Laboratory (ACL2) at Department of Parasitology. This facility was the only one in the university, and it allows work on mosquito infection.

Indra has been the key person playing a vital role in spearheading many projects on vectors of malaria and dengue. She was the pioneer to incriminate the vectors of *Plasmodium knowlesi* in the current era and was responsible for establishing that *P. knowlesi* was also found in humans from all states in P. Malaysia. She has also established a new proactive paradigm for dengue surveillance, where infected mosquitoes are detected before cases are reported. A cluster randomized control trial has been conducted to proof the effectiveness of this paradigm. Along with her fellow colleagues she has obtained an LRGs grant from the Ministry of Education to study the vectors of zoonotic malaria throughout Peninsular Malaysia.

She has published more than 170 scientific papers in peer-reviewed international and local journals, ten book chapters and one book. From 2012 onwards, 11 PhD students and 4 MSc students have graduated under her supervision. In recognition of her outstanding contribution to the field of parasitology and tropical medicine in Malaysia and Southeast Asia, she was awarded by the Malaysia Society of Parasitology and Tropical Medicine the most prestigious award, the Sandosham Medal in 2006. In 2017 she was awarded Malaysia's Research Star Award for outstanding national research in Tropical Diseases by the Ministry of Higher Education. She was the president of the Malaysian Society of Parasitology and Tropical Medicine in 1998 and 2004.

She was appointed as the WHO malaria consultant for Lao PDR from 1999 to 2002. During this time (in 2000), her team conducted studies on the bionomics of malaria vectors in southern part of Lao PDR and the epidemiology of malaria resulting in the incrimination of *Anopheles dirus* for the first time as vector of malaria in Lao PDR.

Indra has been appointed a member of the WHO Expert Advisory Panel on Vector Biology and Control since 1998 (till 2021). She has been appointed as temporary adviser, WHO on many occasions. In 2013 until 2016, she was appointed as member of the WHO Vector Control Advisory Group (VCAG) on New Tools for vector control.

She was the Editor of *Tropical Biomedicine* from 2006-2014 and was responsible for obtaining the ISI status from Thompson Web of Science. It is the first local medical journal to obtain impact factor in the country. She was the subject editor for an international journal *Parasites and Vectors*, from 2016 to 2020. Currently, she is an editorial board member of this journal. She was cited by Stanford University as one of the top 2% scientists for the years 2022, 2023 and 2024 in her field of expertise.



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Research interest: Medical entomology, vectors for malaria, dengue, JE & filariasis

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Academic staff

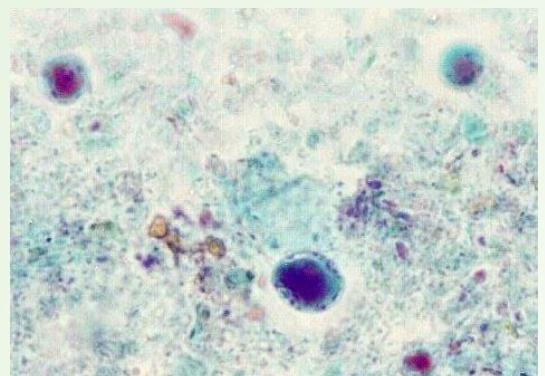
Prof. Dr. Suresh Kumar

Honorary Professor

Professor Dr. Suresh Kumar Govind completed his PhD from the National University of Singapore in 1994. He became a lecturer at the Department of Parasitology, Faculty of Medicine, University of Malaya, and Associate Professor in 2001 and a full Professor in 2006. He also served as the Head of the Department of Parasitology, UM from 2015 to 2019.

His special focused dedication was on *Blastocystis* and for the past 25 years have generated more than 140 scientific papers, presented more than 270 conference papers, and written several chapters in publications by the WHO. He has supervised more than 100 elective, diploma, graduate and post-graduate students including at doctorate level. His expertise in *Blastocystis* has enabled him to be appointed as reviewer for internationally refereed journals and is responsible for placing the organism for the first time in the fact list of the WHO publication on the drinking water guidelines. He was the winner of the National Young Scientist Award, Malaysian Toray Grant Award, Commonwealth Scholarship Award, ITEX Gold Innovative Award (National), ITEX gold medal (International), Malaysian Society of Parasitology and Tropical Medicine Silver Medal, the Prime Minister's Productivity Award, the prestigious Malaysian Toray Science Award as well as winning a few times the University Malaya excellence award. He was conferred the global Malayalee Award, National Educators Award from the Association of Private Institutions for research and Fellow to the Malaysian Academy of Science in 2015. He won the Parija Oration Award from the Indian Academy of Tropical Parasitology and Sandosham Medal Award from MSPTM in 2016 and 2017, respectively, for his outstanding contribution to the field of Parasitology.

He has served as an expert member for the Drinking Water guidelines committee for the World Health Organization since 2004. He has also served as an International Consultant for Indian Ocean Center for Education in Human Values, Mauritius. He has been appointed by the Prime Minister of Malaysia to be a member of the National Unity Consultative Council (NUCC) and the committee for inter-faith promotion (JKMPKA) a board member to IKLIN and currently the Chairman of Board of Trustees for the Yayasan Perpaduan Malaysia. Prof Dr Suresh Govind was the former President of the Sathya Sai International Organization, Malaysia, an organization dedicated to the promotion of human values, service and national unity. He is currently the International coordinator for community engagement for 120 countries for the World Sathya Sai International Organization as well as the Coordinator for the Friendship Group of Inter Religious Service, consisting of members from all the major religious groups in Malaysia.



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Research interest: *Blastocystis*, drug trials & parasite biology, diagnostic parasitology

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Academic staff

Prof. Dr. Yvonne Lim Ai Lian

Professor Dr. Yvonne Lim Ai Lian is currently the Associate Deputy Vice-Chancellor (Academic and International), Universiti Malaya, Senior Professor at the Department of Parasitology, Faculty of Medicine and a University Senate Member. She is a fellow of the Academy of Sciences Malaysia, the co-chair of the Asia Pacific Women in Leadership Programme and a member of the International Advisory Committee of the Association of Pacific Rim Universities. Prior to this, she has taken on university and national leadership roles as the Deputy Dean (Research) at the Faculty of Medicine, Director of International Relations Office and Associate Vice Chancellor of Global Engagement, Universiti Malaya. She was also the former President of the Malaysian Society of Parasitology and Tropical Medicine (MSPTM) and former Council Member of the Academy of Sciences Malaysia (ASM).

Her research focuses on host-parasite-environment interactions among underserved indigenous communities from a range of socioeconomic, ecological and urbanisation gradient. She has been studying infectious diseases among the Orang Asli (indigenous) populations of Peninsular Malaysia for close to three decades. Her involvement in shaping national policies, including the draft of the National Policy for the Development of Orang Asli (Indigenous), underscores her commitment to community welfare.

In recent decade, her team's work with collaborators from New York University unravelled the mechanisms of how low levels of helminth (worm) infection promote growth of probiotic gut microbiota, which was published in Science 2016. The gut microbiome work has also expanded to among HIV and cancer patients. Recently, her collaboration with the National Institutes of Health (NIH), USA has not only delved deeper into the understanding of parasitic infections and gut microbiome but also into the association of skin infections with skin microbiome.

Her work has been funded by various national and international grants (eg. US NIHR01 grants). More recently, she was awarded the NIH Grant Number: 1R01AI183416-01 as a principal investigator. She has published more than 250 peer-reviewed scientific articles, 9 book chapters and 3 books. She has supervised to completion more than 40 postgraduate students and hosted researchers from a vast network of local and international partnerships (eg. US, UK, Australia, Germany, Japan, Philippines, Thailand, Indonesia, Singapore). She was a visiting researcher at the Scottish Parasite Diagnostic and Reference Laboratory (formerly Scottish Parasite Diagnostic Laboratory), Glasgow, Scotland; a visiting fellow at the Department of Veterinary Science, University of Melbourne, Australia; a visiting professor at the Massachusetts Institute of Technology (MIT), USA and the Department of Molecular Parasitology and Tropical Diseases, Taipei Medical University, Taiwan.

She has received numerous awards and recognitions, among which were the MSPTM Medal 2007 (awarded in 2008) for being an outstanding young scientist; the Universiti Malaya Excellent Lecturer award for the Science Disciplines (2015); the Top Research Scientists of Malaysia Award (2016) and inducted as a Fellow of the eminent Academy of Sciences Malaysia (2017). She was cited by Stanford University as one of the top 2% scientists for the years 2019, 2021, 2023 and 2024 in her field of expertise. In 2021, she was awarded the Fulbright Scholar Award 2021/2022 for an attachment at the Laboratory of Parasitic Diseases, National Institute of Allergy and Infectious Diseases (NIAID), National Institutes of Health (NIH), USA. She was awarded the Sandosham Gold Medal Award 2023 (awarded in 2024) which represents the highest work of distinction awarded by the Malaysian Society of Parasitology and Tropical Medicine to outstanding Scientists for their achievements in the field of Parasitology and Tropical Medicine.

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Research interest: Protozoa & helminth, gut microbiota, indigenous health, molecular epidemiology, waterborne parasites (*Cryptosporidium*, *Giardia*)

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Academic staff

Prof. Dr. Fong Mun Yik

Professor Dr. Fong Mun Yik obtained his PhD degree from the University of Malaya (UM) in 1996. He joined the Department of Parasitology, Faculty of Medicine, UM in 1998 as a junior lecturer. He was promoted to the position of Associate Professor in 2003, and to full Professor in 2008.

As an academician in the university, he teaches Medical Parasitology at various levels such as Masters of Pathology, MBBS, Pharmacy, Biomedical Science and Nursing Science degrees. He was a guest lecturer and external examiner for the Southeast Asian Ministers of Education Tropical Medicine Network (SEAMEO-TROPMED) Advanced Diploma of Applied Parasitology and Entomology programme at the Institute for Medical Research, Kuala Lumpur.

Professor Fong's main research interest is in molecular parasitology, particularly in the areas of molecular epidemiology and development of recombinant antigens for serodiagnosis of parasitic infections. His main focus now is on the zoonotic malaria parasite *Plasmodium knowlesi*.

Professor Fong has received numerous research grants from various external funding bodies including China Medical Board, Academy of Science Malaysia, Malaysian Toray Science Foundation, the Ministry of Science's Intensified Research Priority Area (IRPA) and ScienceFund, Ministry of Higher Education's High Impact Research Grant, Long-Term Research Grant and Fundamental Research Grant Schemes.

Professor Fong was elected as the President of the Malaysian Society of Parasitology and Tropical Medicine (MSPTM) in 2006-2007 and 2011-2012. In 2007, he was given the honour to chair the organising committee of the joint MSPTM and Royal Society of Tropical Medicine and Hygiene (London) Centenary Celebration. He was the President of the Malaysian Society of Molecular Biology and Biotechnology in 2007-2009.

Professor Fong has served as research proposals assessor for UM Wellness, UM Biotechnology & Bioproduct clusters, FRGS, MyLab and ScienceFund grant schemes. He was appointed by the USM Vice Chancellor to serve in the university's Industry and Community Advisory Panel in 2013-2015, and by the USM Senate to be in the Committee of Studies, Master of Biomedicine Programme. He also was an academic assessor for new Master (USM) and Bachelor (UiTM) degree programmes. He also reviews research proposals for the National Science Center, Poland.

Professor Fong serves as the member of the Editorial Board of Tropical Biomedicine, and the Asian-Pacific Journal of Tropical Medicine. He is a regular reviewer of manuscripts for PLoS One, Malaria Journal, Parasites & Vectors, AJTMH, Acta Tropica, Infection, Genetics and Evolution and BMC Infectious Diseases.

Professor Fong joined the UM Quality Management and Enhancement Centre (QMEC) in 2005, appointed QMEC's Head of Documentation Unit in 2009-2016, and Deputy Director in 2016. He is a MOHE-appointed auditor for the Malaysian Research Assessment (MyRA). He is a member of the Board of Governors of the International University of Malaya-Wales (IUMW) since 2013.

Professor Fong has been awarded the UM Excellent Service Award four times – in 2002, 2006, 2009 and 2013. He was awarded the Malaysian Society of Parasitology and Tropical Medicine (MSPTM) Medal in 2007. He was elected as a Fellow of the Academy of Sciences Malaysia in 2021.

Prof. Fong retired on 19 July 2024.

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Research interest: Genetic diversity and molecular & epidemiology of malaria parasites, diagnostic parasitology

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Academic staff

Prof. Dr. Lau Yee Ling

Professor Dr Lau Yee Ling is at present the Head of the Department of Parasitology, Faculty of Medicine at Universiti Malaya (UM). She started her academic career as a lecturer at Monash University Sunway Campus while waiting for her PhD viva in 2008. During her time as a lecturer in Monash University, she was awarded two Monash University Research Grants in which enabled her to continue her research in the field of molecular parasitology. She then returned to her alma mater, University of Malaya, as a Senior Lecturer in 2009. She was granted tenure in 2010 and promoted to Associate Professor in 2013, and Professor in 2019. She was appointed a fellow of the Academy of Sciences Malaysia in 2019. Professor Lau's scientific career has been dedicated to the study of protozoan parasites, including *Plasmodium knowlesi* and *Toxoplasma gondii*, the causative agents of malaria and toxoplasmosis, respectively. These parasitic diseases exact enormous social and economic burdens. Her research interest mainly focuses on using molecular methods for the detection and characterization of these parasites infecting humans and animals. She has collaborated with local and international researchers, leading to publication of more than 230 ISI journals, with H-index of 33. This research excellence has enabled her to acquire and be a part of many international and local research grants, i.e., Hubert Curien Partnership-Hibiscus (PHC-Hibiscus), ASEAN-India Collaborative R&D scheme, GCRF Global Impact Acceleration Account (GIAA) Impact Fund, High Impact Research Grant, University of Malaya Research Grant, FRGS, E-science, LRGS and others, with cumulative research funding amounting to at least RM5 million. These were followed by several intellectual property rights under her belt on rapid molecular diagnosis of dengue, malaria and COVID-19. Since 2009, 13 Masters and 19 PhDs have completed their studies with success under her guidance. Currently, they are 4 Masters and 6 PhDs under her supervision. With her experience in grant management, she had held numerous administrative posts such as the Head of Grant Management Unit, of Health and Translational Medicine Cluster and Faculty of Medicine, besides being a committee member in evaluating applications for FRGS, LRGR and TRGS at the national and international levels. She established the Science Café in 2017, which continues to be the main channel of research communication between clinicians and scientists at the Faculty of Medicine. She was also a committee member of the University of Malaya Institutional Biosafety and Biosecurity Committee (IBBC), Animal Experimental Unit, Faculty of Medicine Risk and Quality Management and an internal auditor of Faculty of Medicine. Currently, she is the editor-in-chief for the Journal of Health and Translational Medicine (JUMMEC) for Universiti Malaya, editor of Asia Pacific Journal of Molecular Biology & Biotechnology and associate editor of BMC Infectious Diseases. Professor Lau has been an active member of the Malaysian Society of Parasitology and Tropical Medicine (MSPTM). She was a council member of the MSPTM in year 2018-2019. She is also active in the Malaysian Society for Biochemistry and Molecular Biology (MSBMB). She was the Honorary Secretary of the MSBMB in 2017-2019 and the current President. Professor Lau's passion for research can only be matched with her passion for teaching and education. When conducting classes, besides ensuring her lectures are easy to follow, she makes all attempts to infuse interest and solicit students' participation by incorporating more recent articles and real-life scenarios in order to illustrate the day-to-day relevance of the teaching subject matter. And because of her enthusiasm for education, she has volunteered to be the Problem-Based Learning (PBL) Phase II coordinator in 2011 then became the PBL main coordinator in 2018. Professor Lau has been awarded the MTSF's Science & Technology Award for Year 2020, University of Malaya Excellent Service Award three times in 2011, 2013 and 2015. She was awarded MSPTM Nadchadtram Medal in 2014. She has also been awarded a few times for her innovation in research including the Grand Prize in National Exclusive Innovation Challenge Award 2018.

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Research interest: Malaria, diagnostic parasitology, molecular cloning & expression

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Academic staff

Prof. Dr. Hesham M. Al-Mekhlafi

Hesham Al-Mekhlafi has a PhD in public health (UM, 2009), master's degrees in medical science (parasitology) (UKM, 2004) and in applied statistics (UM, 2012) as well as a bachelor's degree in medical laboratories (1997). Since early 2000s, he has been actively engaged in research on the epidemiology and prevention of infectious diseases including malaria, neglected tropical diseases, NTDs (such as soil-transmitted helminthiasis, schistosomiasis, leishmaniasis and dengue fever), and waterborne parasites. He joined the department of parasitology, Universiti Malaya in 2009 as a senior lecturer and promoted to associate professor in 2012. In 2016, he joined Jazan University, Saudi Arabia and promoted to full professor in 2022. He re-joined Universiti Malaya in July 2023.

He has taught several courses in parasitology, epidemiology, biostatistics, and research methodology at undergraduate and postgraduate levels. He has established passionate research teams that involved diligent postgraduate students, enthusiastic colleagues, and inspiring national and international collaborators. The research dedicated to helping vulnerable rural and aboriginal communities in Malaysia and other countries including Yemen, Nigeria and Libya against the NTDs, malaria and other infectious diseases. He has published more than 150 articles in ISI & Scopus indexed journals; with h-index of 41 (WoS).

Prof. Hesham has been a member of several academic, scientific and administrative councils and committees. He is a member of the editorial boards of several renowned journals, and a regular reviewer for many peer-reviewed journals as well as a panel member of assessors for various national and international research grant schemes and postgraduate programs. He has been listed among the Top 2% scientists in the world in the field of tropical medicine in 2020–2024 for both singular year and career-long citation impact by Stanford University through Scopus-Elsevier.

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Research interest: neglected tropical diseases, waterborne parasites, malaria, health education, molecular epidemiology

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Academic staff

Assoc. Prof. Dr. Wan Yusoff Wan Sulaiman



Dr. Wan Yusoff obtained his PhD from Keele University, UK in 1999. He is life member of British Society for Parasitology since 1995, member of Malaysian Society of Parasitology and Tropical Medicine.

He has been appointed as consultant for many projects/companies such as Putrajaya Lake and Wetland Water Quality and Biological Monitoring Services for Perbadanan Putrajaya, Evaluation of Insecticides product from CUBA, Water-borne vector and mosquito.

Dr. Wan Yusoff has received University Malaya Excellent Award – Consultancy in 2018, and numerous time of certificate of excellent service from UM.

Dr. Wan Yusoff has involved in the teaching activities for the students of various programs, such as Medical Bachelor and Bachelor of Surgery (MBBS), Bachelor of Biomedical Science, Master of Medical Parasitology and Entomology, as well as external elective courses for the undergraduate students in Universiti Malaya.

Currently, he is the Deputy Dean of Development, Faculty of Medicine, University of Malaya. He has published numerous papers and chapters in book. He has received grants from various funding bodies including UM internal RU grant, UMRG, FRGS, and international funding. His research interests focus on mosquito geospatial and temporal distribution monitoring, insect immunology, and vector-borne diseases.

Assoc. Prof. Wan yusoff retired on 9 January 2024.

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Academic staff

Dr. Karshini A/P Jeya Pirathaba

Dr. Karshini is deeply passionate about diagnostic microbiology and parasitology, specializing in the development of diagnostic tools and technologies for identifying pathogens responsible for parasitic diseases. After obtaining her Master's in Pathology (Microbiology) in 2022, she gained valuable experience as a medical microbiologist at Hospital Kuala Lumpur and Hospital Queen Elizabeth, Kota Kinabalu. Driven by her dedication to advancing diagnostic methods, she joined the Department of Parasitology in December 2023 to further her research and teaching. Currently, she serves as a medical lecturer at the University of Malaya and the coordinator of the Parasitology Diagnostic Unit at the University Malaya Medical Centre, where she continues to innovate in the field of parasitology diagnostics. . Dr. Karshini is a certified yoga teacher and actively teaches yoga, merging her interests in health and wellness with her scientific expertise.



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Research interest: medical parasitology

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Academic staff

Dr. Cheong Fei Wen

Cheong Fei Wen obtained her Bachelor Degree in Biomedical Science (with distinction) from Universiti Malaya (UM), Malaysia. She passed her PhD with distinction and is currently holding the post of senior lecturer in the Department of Parasitology, Faculty of Medicine, UM.

Since PhD study, she explored into several malaria-related aspects, including protein expression of the *Plasmodium knowlesi* merozoite surface proteins; immunogenicity study using animal model; and epitope mapping. Her current research interests include phenotypic and genotypic measures on *Plasmodium* sp. resistance against anti-malarials, immunogenicity profiling of potential malarial vaccine candidates, and genome engineering in *P. knowlesi* using CRISPR-Cas9 system.

With her deep passion in research, she has been successfully selected and awarded to attend several international workshops/courses including Ungku Omar-Newton Fund Researcher Links Workshop: Neglected Disease in SEA: Building Capacity in Epidemiological Modelling (University of Malaya, Malaysia & Imperial College London, UK) and Wellcome Genome Campus Advanced Course: Malaria Experimental Genetics (WGCAC, UK).

She has also obtained and be part of 10 research grants, including UM Research Fund Assistance (BKP), UM Research Excellence Grant (UMREG), Postgraduate Research Fund (PPP), Frontier Research Grant (FRG), Fundamental Research Grant Scheme (FRGS), and Long-Term Research Grant Scheme (LRGS), with total amount exceeding RM 2 million. With that, she has published about 30 articles in ISI-indexed journals.

She is currently the assistant editor of the Journal of Health and Translational Medicine (JUMMEC), associate editor of Asia Pacific Journal of Molecular Biology and Biotechnology (APJMBB), and editorial board member of Tropical Biomedicine. She was the council member for Malaysian Society of Parasitology and Tropical Medicine (MSPTM) in 2019-2020.

She received excellent service certificate and excellent service award, UM in 2019 and 2024, respectively. She has been appointed as Programme Coordinator and assisted the department to develop a new Master by Coursework programme (Master of Medical Parasitology and Entomology, MMPE). She is also the course coordinator for courses in MMPE and Biomedical Science Programme. She is the committee member of Quality Assurance Programme - Quality Committee, Faculty of Medicine (FOM) from 2020. With her interest in academic curriculum, she has also been appointed as Programme Quality Assurance Expert (Pro-QAE) of FOM in 2021, and Pro-QAE of UM in 2024 to assist in programme curriculum related matters.



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Academic staff

Dr. Wahib Mohammed Mohsen Atroosh

Dr. Wahib M. Atroosh, hailing from Yemen, is a senior lecturer in the Department of Parasitology at Universiti Malaya (UM), where he has been a faculty member since 2019. He began his academic journey in the same department, completing his Master's degree in 2012, and subsequently pursued a PhD, which he earned with Distinction in 2017. Dr. Wahib's research focuses primarily on *Plasmodium falciparum*, the parasite responsible for the majority of severe malaria cases in humans, known for its high mortality rate and increasing resistance to antimalarial drugs. His expertise includes monitoring antimalarial drug resistance through in vivo clinical trials and the application of molecular gene markers of drug resistance. In addition to his primary research on malaria, Dr. Wahib collaborates with local and international research teams, including partnerships with the Medical Research Center at Jazan University in Saudi Arabia, the School of Biological Science at Universiti Sains Malaysia, and the College of Health Sciences, Nigeria. These collaborations explore the epidemiology, genotyping, and molecular characterization of antimalarial drug resistance in *P. falciparum* isolates from both Saudi Arabia and Nigeria. Dr. Wahib's contributions to the field of parasitology extend to other areas, including research on cutaneous leishmaniasis intestinal protozoa, schistosomiasis, soil-transmitted helminths (STH), and parasite-related health education programs. He has also been involved in developing a novel gene marker aimed at differentiating *P. falciparum* isolates, enhancing the correctness of the *in vivo* malaria drug efficacy outcome. Throughout his career at UM, Dr. Wahib has successfully secured internal and external research grants and contributed to 43 publications in indexed journals. His scholarly work has resulted in an h-index of 18 and a total of 1,519 citations. He was also awarded the Universiti Malaya Excellent Service Award (APC) for the year 2023. Dr. Wahib actively contributes to the academic community as a member of scientific and technical committees and serves as a judge at international conferences. He is also a peer reviewer for several esteemed journals, including Scientific Reports, PLoS ONE, PLoS Neglected Tropical Diseases, Parasites & Vectors, Malaria Journal, Transactions of the Royal Society of Tropical Medicine and Hygiene, BMC Medicine, Pathogens and Global Health, and Tropical Biomedicine. His involvement in these roles underscores his commitment to advancing research and fostering collaboration in the field of parasitology.

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Academic staff

Dr. Lee Wenn Chyau

Wenn-Chyau Lee received his BSc (Hons) degree in Biomedical Science from University of Malaya, Malaysia in 2011, and graduated with his PhD in Medical Sciences from University of Malaya in 2014. Subsequently, he joined Singapore Immunology Network (SIgN, A*STAR) as a research fellow in Laurent Renia's Laboratory. He was appointed as SIgN fellow after receiving the prestigious OF-YIRG grant awarded by the National Medical Research Council (NMRC) of Singapore in 2018. He joined the newly formed A*STAR ID Labs as an investigator in 2021. Subsequently, he joined the Department of Parasitology, Faculty of Medicine, University of Malaya as a senior lecturer. Currently, he is also an adjunct investigator of A*STAR ID Labs, Singapore.

As a parasitologist, he has involved in studies encompassing several medically important parasites. His main research interest revolves around the immuno-pathobiology of malaria. He has been investigating and deciphering the roles of rosetting (a phenomenon where a *Plasmodium*-infected red blood cell is stably adhered to uninfected red blood cells, forming a flower-like structure called 'rosette') in the pathogenesis of malaria. Besides, he is exploring the potential of applying different biocontrol strategies to eliminate vector-borne diseases. He has worked as a research fieldworker in different places including the Thai-Burmese Border, China, peninsular Malaysia and Malaysian Borneo. As different laboratory settings are equipped differently, he enjoys adapting and improvising facilities available in the field sites to conduct experiments, as well as coordinating the insectarium and Arthropod Containment Level 2(ACL2) facility in the Faculty of Medicine, Universiti Malaya. To date, he has published (as first/ corresponding author) in reputable journals such as *Blood*, *Frontiers in Immunology*, *eLife*, *EBioMedicine*, *Frontiers in Microbiology*, *Entomologia Generalis*, and *Trends in Parasitology*. Apart from reviewing manuscripts for various journals, as well as evaluating grant proposals for local and overseas funders, he is also an associate editor of *Frontiers in Microbiology* and one of the editorial board members of *Decoding Infection and Transmission*. Previously, he worked as a guest editor for *Tropical Medicine and Infectious Disease*.

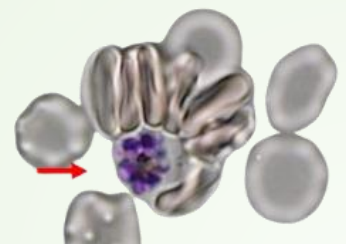
He has involved in the teaching activities for the students of different programs in Universiti Malaya, such as the Bachelor of Medicine, Bachelor of Surgery (MBBS), Bachelor of Biomedical Science, Master of Pathology (MPath), and Master of Medical Parasitology and Entomology, as well as the students from overseas institutes, such as the Master of Science Program in Public Health, Infectious Diseases and Epidemiology, Faculty of Public Health, Mahidol University, Thailand. Besides participating as the coordinator for courses and several projects in the department, he is also the instructor of the microscopy training for the Diploma in Tropical Medicine and Hygiene (DTM&H) co-organized by the University of Glasgow and Universiti Malaya. He has been a member of the Research Management Unit (RMU), Faculty of Medicine, Universiti Malaya since 2022. He is a member of the A*STAR Global Network (A*GN), Singapore, since 2023. He is also a member of the Malaysian Society for Biochemistry and Molecular Biology (MSBMB), since 2024.

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Research interest: Malaria immuno-pathobiology, host-parasite interactions, vector biocontrol

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Academic staff

Dr. Tan Tiong Kai



Tan Tiong Kai (Stanley) received his bachelor's degree in Conservation and Biodiversity Management from the Universiti Malaysia Terengganu in 2010. He then earned his PhD from the Universiti Malaya in 2016, for his studies on nematology and drug resistance. Following the completion of his PhD study, he was enrolled as a Post-Doctoral Fellow at Biodiversity Research Center, Academia Sinica, Taipei, Taiwan. Subsequently, Dr. Tan was appointed as a Post-Doctoral Research Fellow at Faculty of Medicine, Universiti Malaya. Currently, he is a senior lecturer at the Department of Parasitology, Faculty of Medicine, Universiti Malaya.

His current research interests include (1) Epidemiology of blood and gastrointestinal parasites and vector-borne diseases; and (2) Medico-veterinary parasitology and entomology, particularly in the aspects of anthelmintic and insecticide resistance.

Dr Tan TK also actively involves in one of the oldest professional societies in Malaysia, the Malaysian Society of Parasitology and Tropical Medicine (MSPTM). He serves as the Honorary Secretary for the 61st MSPTM Council 2024-2026. He was Honorary Secretary for the 56th Council of MSPTM 2019/2020; and Honorary Assistant Secretary for the 55th Council of MSPTM 2018/2019. In addition, he is also a Managing Editor of Tropical Biomedicine, an ISI-indexed journal for parasitology, entomology, tropical medicine and other aspects of biomedical research.

Tel: 03 – 79677450

Email: tantk@um.edu.my

Research interest: Vector-borne diseases, filariasis, helminthiasis & protozoan diseases, anthelmintic resistance

Link: <https://umexpert.um.edu.my/tantk.html>

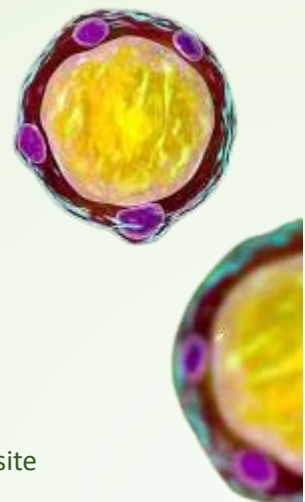


Academic staff



Dr. Arutchelvan A/L Rajamanikam

Dr. Arutchelvan Rajamanikam is a researcher and senior lecturer from the Department of Parasitology, Faculty of Medicine, University Malaya (UM). He has been active in understanding the role of highly prevalent protozoan parasite, mainly, *Blastocystis* sp. in healthy and diseased individuals. Arutchelvan completed his undergraduate studies in the field of Resource Biotechnology in 2010 and ventured into Parasitology during his Masters studies(MMedSc) in University of Malaya (2015). His interest in understanding the interaction and synergism of intestinal parasite and gut microbiome led him to complete his doctoral studies(PhD) in University of Malaya in the year 2019. Arutchelvan currently aims to make use of data analytics and data science to decipher the gut microbial diversity patterns, metabolic profile and function in understanding health and explore the predictive ability of the gut microbiome for the benefit of preventive medicine. He has currently embarked into various projects relating to gut microbiome in colorectal cancer and mental illness with fundings closed to 1 million. He also contributes as reviewer for various ISI-indexed journals. Recently he was appointed as a working group member for European Cooperation in Science and Technology action (CA21105). His current research interest includes the host-parasite interaction in *Blastocystis* sp. and *Acanthamoeba* sp.



Tel: 03 – 79675734

Email: arun04@um.edu.my

Research interest: Data analytics, predictive modelling, intestinal parasitology, host-parasite interaction

Link: <https://umexpert.um.edu.my/arun04.html>



Academic staff

Dr. Junaid Olawale Quazim

Dr. Junaid Olawale Quazim is a senior lecturer at the Department of Parasitology, Faculty of Medicine, Universiti Malaya, Kuala Lumpur. He obtained his PhD in Medical Parasitology from the Universiti Malaya (UM) in 2018. Prior to this, he did his Bachelor's and Master's degrees in Nigeria before he joined academics, at Federal University Kashere, Gombe State, Nigeria, as a Lecturer in 2012.

He got scholarship from the Nigerian Government for his PhD programme in 2014. Hence, he went back to Nigeria after his PhD to continue his job as a Lecturer until he joined the Department of Parasitology, Faculty of Medicine, Universiti Malaya in May, 2023 as a senior lecturer.

Dr. Junaid's work centers on mosquito-borne parasitic diseases (malaria and filariasis), zoonotic filariasis, interactions between the parasites, hosts and vectors, and immunology. Presently, he has an international collaboration with Humboldt Research Hub-Center for Emerging & Re-emerging Infectious Diseases (HRH-CERID) at Ladoké Akintola University of Technology (LAUTECH), Ogbomoso Oyo State, Nigeria, working on 'Molecular Surveillance for HRP2/3 Gene Deletion in Nigeria'. He has published over 17 articles in various categories of journals.



Tel: 03 – 79674978

Email: junaid.quazim@um.edu.my

Research interest: Zoonotic filariasis

Link: <https://umexpert.um.edu.my/junaid-quazim.html>



Academic staff

Dr. Aida Syafinaz Mokhtar

Dr. Aida Syafinaz Mokhtar holds a Bachelor Degree in Biomedical Science (2009), Master of Medical Science (Molecular Microbiology) (2012) and PhD in Parasitology (2017); all three Degrees were conferred by the Universiti Malaya. She then pursued her postdoctoral study in UM Centre of Innovation & Commercialisation (now known as UM Centre of Innovation & Enterprise, UMCIE), working on the accreditation of ISO 13485 (Medical Devices) to translate UM life science proprietary technologies into validated marketable products, processes, and services.

Dr. Aida started her teaching career when she joined Manipal University College Malaysia (MUCM) as an Assistant Professor at the Department of Microbiology in year 2021. A year later, she was offered a position at Universiti Teknologi MARA (UiTM) Cawangan Negeri Sembilan Kampus Kuala Pilah as a Senior Lecturer, School of Biology.

With her strong interest and passion in research, she joined the Department of Parasitology in 2023, to continue working on a topic for which she feel passionately; medically-important ectoparasites among underprivileged children from disadvantaged communities in Malaysia. She is actively researching the potential associated pathogens in head lice by metagenomic approach.

Tel: 03 – 7967 4978

Email: aidasyafinaz@um.edu.my

Research interest: DNA barcoding of medically-important ectoparasites

Link: <https://www.webofscience.com/wos/author/record/AAK-1857-2020>





Academic staff

Dr. Rajiv Ravi

Ts. Dr. Rajiv Ravi is a Researcher and Senior Lecturer from the Department of Parasitology, Faculty of Medicine, University Malaya (UM). Professional Technologist (Ts) certified under (MBOT), Biotechnology specialist. Rajiv Ravi completed his undergraduate in the field of Biotechnology in 2010 and venture into Parasitology in the field of applied parasitology in University Science Malaysia (2013). He has been active in understanding the role, life cycles, prevalences, morphology and molecular identifications parasites in aquatic environment, mainly *Zeylanicobdella argumensis*, *Neobenedenia melleni*, *Acanthocephala*, and *Caligus clemensi*. Further completed Molecular Parasitology Doctoral Research (PhD) in University Science Malaysia in the year (2018). He then pursued his Postdoctoral work in collaborative research project from Vector Control Research Unit (VCRU) USM & UMK on the establishment of various bioinsecticides against *Aedes* mosquitoes. The notable achievements in his term were from the invention of Nano-Azo's Mosquito Control, published 2019 in Berita Harian Malaysian Newspapers under the segment of Varsity. Additionally, won Gold Medals in ITEX, MTE 2019 and Invited Judge Panel for MTE Invention and Innovation Award Category, 2020. Moving on from there he, joined private academic university as a Lecturer, and secured Principal Investigator (PI) for KPT Research Grants Title, Larvicidal activities of *Areca catechu* L. extracts against *Aedes* (Diptera) (FRGS) worth RM70,100 and Co-Researcher for MOF research grant title, Superfood Spirulina worth RM284,000. Next in his career progression, he moved his achievements as Head of Biology Department for Sumitomo Chemicals under the Environmental Health and Technology Centre (EHTC), working with new active developments and data generations for HCRL, Tarkazuka, Japan Research Sumitomo Institutions. He also played major role as New Idea Development (NID) coordinator for Environmental Health Technology Centre (EHTC), Asia Pacific and Japan.

Consultancy Projects:

- Product Registration Kao, KAO MALAYSIA SDN BHD, Professional Consultant (Ir., Ar., Sr., Ts., dsbnya)
- 16 Oct 2024 - 19 Oct 2024 (*National*)
- Product Registrations for Kao (Malaysia) Sdn Bhd
- 30 Apr 2024 - 30 Jun 2024 (*National*)

Tel: 03 - 79674755

Email: rajivravi@um.edu.my

Research interest: vector-borne diseases, dengue

Link: <https://umexpert.um.edu.my/rajivravi.html>



Academic staff

Dr. Lai Meng Yee



Dr. Lai Meng Yee graduated with Bachelor of Science degree (Microbiology) in 2006 from Universiti Sains Malaysia. She obtained her Master of Biotechnology in 2011 and Doctorate degree in 2018 from Universiti Malaya. She served as post-doc research fellow at the Department of Parasitology, Faculty of Medicine from 2019 to 2024. She is currently serving as a senior lecturer at the same department since July 2024. Dr. Lai's area of expertise are molecular parasitology, molecular epidemiology and diagnostic kit development.

Dr. Lai carries out host parasite interaction study to investigate the relationship between parasites and its' host cell receptors/ligands. She successful find out the potential host cell binding partner of *Toxoplasma gondii* during the invasion. Dr. Lai is also interested in exploring the mechanisms of malaria infections and the interactions between infected patients and malaria parasite invasion using a molecular epidemiology approach. She also interested to investigate the distribution of zoonotic malaria parasites, originally transmitted from non-human primates through mosquito bites.

Other than that, Dr. Lai also works on the identification and differentiation of human malaria and zoonotic malaria parasites using various molecular techniques, such as real-time PCR analysis, recombinase polymerase amplification (RPA) and Loop-mediated isothermal amplification (LAMP). By employing these molecular techniques, Dr. Lai has developed numerous diagnostic methods for malaria, SARS-CoV-2, and dengue. These methods and primers had been patented. Dr. Lai's dedication and hard work have resulted in more than 40 ISI-Cited publications, making substantial contributions to science and technology. Dr Lai also also have been awarded a few times for the innovation in research including Gold, and Medal prizes from Korea Creative Invention Contest, CIC 2017, Cabaran Inovasi Inklusif 2018 Zon Tengah, World Invention Innovation Contest (WiC) 2018, International Invention Innovation Competition in Canada, iCAN 2022 and Inovasi Kreativiti Teknologi Keusahawanan dan Masyarakat (organized by Ministry of Higher Education Malaysia and Universiti Malaysia Kelantan).

To date, she has published more than 40 ISI-cited publications with total citations index of 443 and H-index of 12. Also, she has assisted more than 25 PGs in their research projects. 2 Master and 1 PhD students have completed their study. Recently, she is awarded a research grant from the Ministry of Higher Education Malaysia, to further her zoonotic malaria research.

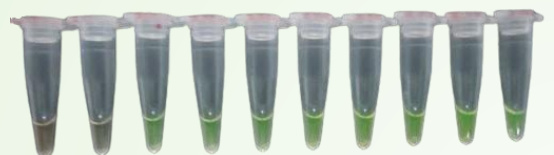
Overall, Dr. Lai's steadfast dedication to scientific research and innovation has propelled significant progress in disease detection and prevention, highlighting her as an outstanding young scientist and a role model for the scientific community.

Tel: 03 - 79674790

Email: mengylai11@um.edu.my

Research interest: molecular parasitology, molecular epidemiology and diagnostic kit development

Link: <https://umexpert.um.edu.my/mengylai11.html>





Academic staff

Dr. Tania Ivorra

Tania Ivorra received her BSc degree in Biology from the University of Alicante, Spain in 2009, and her Master's degree in Forensic Analysis from the University of Basque Country, Spain, in 2010. She graduated with her PhD in Forensic Entomology from the University of Alicante, Spain, in 2015. After several years in industry, she joined Universiti Teknologi MARA in 2020 as a postdoctoral researcher. Subsequently, she was appointed as a research fellow at the same institution in 2022. Currently, she is a senior lecturer in the Department of Parasitology, Faculty of Medicine, University of Malaya, and she has been an honorary collaborator in the Department of Environmental Sciences and Natural Resources at the University of Alicante, Spain, since 2019.

As an entomologist, she has been involved in studies of several medically important insects. Her primary research interests focus on the ecology, distribution, and development of insects with medical, veterinary and forensic significance. She has particularly investigated the role of *Synthesiomyia nudiseta*, a necrophagous fly species, in forensic investigations, and how its development can help the postmortem interval estimation in indoor cases. Additionally, she has been researching about aquatic forensic entomology, comparing various aquatic scenarios with terrestrial habitats. She has also collaborated on projects involving black soldier flies (*Hermetia illucens*) in Spain and Malaysia. Her experience includes working as a field researcher in various locations, including Spain and peninsular Malaysia. Besides, she has conducted professional trainings in techniques and equipment such as micro-computed tomography scan (micro-CT) at the Natural History Museum in London and confocal laser scanning microscope (CLSM) at Nicolaus Copernicus University in Poland, among others. Her attachments at the Forensic Department of Hospital Sungai Buloh and Chiang Mai University in Thailand have furthered her training as a forensic entomologist. To date, she has published as the first or corresponding author in reputable journals such as *International Journal of Legal Medicine*, *Acta Tropica*, and *Journal of Medical Entomology*.

She has been involved in teaching activities for students in various programs at Universiti Teknologi MARA and Universiti Malaya, as well as for students from overseas institutions, such as the National University of Singapore, Murdoch University in Australia, and the University of Alicante in Spain. She has participated in several forensic cases involving insects through the Legal Medicine Institute of Alicante, Spain, and Hospital Sungai Buloh, Malaysia. She has been a member of respectable forensic entomology associations, such as the European Association of Forensic Entomology (EAFE) since 2010 and the North American Forensic Entomology Association (NAFEA) since 2019.

Tel: 03-7967 4745

Email: tania@um.edu.my

Research interest: forensic entomology, medical and veterinary entomology

Link: <https://www.linkedin.com/in/tania-ivorra/>





Academic staff

Dr. Norhidayu Binti Sahimin

Dr. Norhidayu Sahimin is a senior lecturer in the Department of Parasitology at the Faculty of Medicine, currently seconded to the Higher Institution Centre of Excellence (HiCoE), Tropical Infectious Diseases Research and Education Centre (TIDREC), Universiti Malaya. She joined TIDREC as a post-doctoral research fellow in 2019 and became a senior lecturer on the 1st June 2021. Dr. Norhidayu serves as the Head of the Tick Cell Biobank (Asia Outpost) at TIDREC, one of four global biobank laboratories that provide tick cell lines for research and education. She has conducted training on tick cell lines for international researchers from the Korea Virus Research Institute (KVRI) and Chittagong Veterinary and Animal Sciences University (CVASU), Bangladesh. Dr. Norhidayu has secured several international grants and is the Principal Investigator (PI) of research funded by the Institute of Research for Development (IRD), France, amounting to €20,000 (~RM87,000). Additionally, she leads the internationally funded training program by IRD for students titled "One Health Practice in Southeast Asia: Introduction to One Health," which is funded for €19,000 (~RM86,000). Dr. Norhidayu is also a co-researcher on international grants from the Wellcome Trust, KIRIN Holdings Japan, and the Korea National Institute of Health (KNIH). On a national level, she is the Principal Investigator (PI) for the Fundamental Research Grant Scheme 2021 (FRGS) (RM 137,000) and the SUKUK grant 2023 (RM 626,437) from the Ministry of Higher Education Malaysia. She has also received community funding from the Malaysian Society of Parasitology and Tropical Medicine (MSPTM) 2019 (RM 5,000) and Tenaga Nasional Berhad (TNB) 2021 (RM 22,200). Recently, Dr. Norhidayu secured the Universiti Malaya Research Excellence Grant (UMREG) 2024 (RM 100,000) and the Poverty Research Lab, Ungku Aziz Centre for Development Studies 2.0 2024 (RM 10,000). Dr. Norhidayu has published 36 peer-reviewed papers, with the majority as the first author, and is currently supervising 12 students (5 PhD and 7 Master's students). Dr. Norhidayu has also obtained certifications in Good Clinical Practice (GCP), Collaborative Institutional Training Initiative (CITI Training), Basic GMP Training for Sterile Manufacturing, Biorisk Training for BSL-2 and BSL-3, Biosafety in Field Specimen Sampling Training, and Responsible Care and Use of Laboratory Animals Course (RCULAC). Dr. Norhidayu's extensive research contributions, leadership in biobank initiatives, and dedication to international training and student mentorship underscore her vital role in advancing vector-borne diseases and infectious diseases research at both regional and global levels.

Tel: 03 - 79676670

Email: ayusahimin@um.edu.my

Research interest: ectoparasites, endoparasites, zoonosis, migrant workers/refugees, urban poor-related problems

Link: <https://umexpert.um.edu.my/ayusahimin.html>



Retired academic staff



**Assoc. Prof. Dr. Wan Yusoff
Wan Sulaiman**

Serving period:
22 Sept 1997 – 9 Jan 2024



Prof. Dr. Fong Mun Yik

Serving period:
15 Oct 1998 – 19 July 2024



A big thank you for your contribution

Support staff



Azura Sengah
Administrative Assistant



Awang Bhukhari Bin Matsat
Administrative Assistant



Muhammad Nabil Fikri Hashim
Operation Assistant



Dzuzaini Mohd Ghazali
Research Officer



Mohd Redzuan Ahmad Naziri
Medical Laboratory Technologist



Sharifah Nor Akmar Syed Mohd
Medical Laboratory Technologist



Mohd Khairul Bin Roslan
Medical Laboratory Technologist



Siti Aisah Samion
Medical Laboratory Technologist



Nor Khazilah Tukijan
Hygiene technician

Diagnostic unit

Medical Laboratory Technologist (UMMC staff)



Hasidah binti Omar



Wan Hafiz bin Wan Ismail



Farikha binti Sarip

- **Parasitology Diagnostic Unit** is the diagnostic division stemming from the Department of Parasitology.
- It is a component of the “Unit Pengurusan Makmal”, University of Malaya Medical Centre (UMMC).
- It offers the following services:
 - Malaria detection
 - Microfilariae detection
 - Filariasis IgG
 - Schistosomiasis IgG
 - Amoebiasis IgG
 - Echinococcosis IgG
 - Toxoplasmosis IgG & IgM
 - Toxocariasis IgG
 - Cysticercosis IgG
 - Strongyloidiasis IgG
 - *Acanthamoeba* culture
 - Identification of dipteran larvae/ ectoparasites/ helminths
 - Stool FEME
 - Urine/ vaginal discharge examination (parasite detection)
 - *Leishmania donovani* detection (bone marrow smear)
 - PCR for toxoplasmosis
 - PCR for malaria

Post-doctoral researchers



Dr. Yap Nan Jiun
Molecular epidemiology & parasite
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nanjiunyp@um.edu.my



Dr. Tee Mian Zi
Intestinal helminth infections & gut
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Dr. Phang Wei Kit
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epidemiology
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Dr. Sandhya Pramasivan
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Researcher assistants



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Nur Anis Amirah Bt Abdul Halim
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Chiew Zi Yan
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Liaw Hon Kit
Molecular parasitology
liawhonkit@gmail.com

Research Grants

Principal Investigator (PI)	Grant
Prof. Dr. Yvonne Lim Ai Lian	<ul style="list-style-type: none"> Association of skin microbial dysbiosis and host genetics with fungal skin infections among underserved communities; FRGS (FRGS: FP017-2021), 2021 - 2024: PI Early life effects on later life biological outcomes, evolutionary and molecular mechanisms; NSF grant (IF056-2022), 2022 - 2025: PI The skin microbiome and fungal infections of indigenous Malaysians; NIH (IF045-2024); 2024-2029; PI. Lifestyle effects on Cytomegalovirus prevalence and health outcomes in the Orang Asli; Partnership Grant (MG021-2024); 2024-2025; PI
Prof. Dr. Fong Mun Yik	<ul style="list-style-type: none"> Genetic diversity of <i>Plasmodium knowlesi</i> invasion-related proteins; LRGS (LRGS: LR002A-2018), 2019 – 2024: PI
Prof. Dr. Lau Yee Ling	<ul style="list-style-type: none"> Rapid Point-of-Care (PoC) tests for the detection of malaria; LRGS (LRGS: LR002D-2018), 2019 – 2024: PI In vitro and ex vivo anti-plasmodial activity of <i>Vernonia amygdalina</i> against <i>Plasmodium knowlesi</i>; FRGS (FP007-2021), 2021 - 2024: PI Socioecological dynamics of zoonotic and vector-borne diseases in changing landscapes implications for surveillance and control; Wellcome Trust Award (IF050-2022), 2022 – 2026: PI Unravelling rodent malaria gametocytogenesis to unlock a zoonotic transmission model; Wellcome Discovery Award (IF006-2023), 2023 – 2028: PI The changing landscape of human and zoonotic malaria in Southeast Asia, NIH (IF076-2024), 2024-2029: PI Development of loop-mediated isothermal amplification-lateral flow assay for rapid diagnosis of zoonotic malaria, PRGS (PR002-2024), 2024-2026: PI
Dr. Karshini Jeya Pirathaba	<ul style="list-style-type: none"> Prevalence and diagnostic insights of intestinal parasitic infections in two Malaysian hospitals with varying levels of endemicity; BKP (just awarded), 2025 – 2026: PI
Dr. Cheong Fei Wen	<ul style="list-style-type: none"> Decipher the effect of genetic polymorphisms in <i>Plasmodium knowlesi</i> duffy binding protein alpha on parasite fitness using CRISPR-Cas9 system; FRGS (FRGS: FP025-2023), 2023 – 2026: PI
Dr. Wahib M. Atroosh	<ul style="list-style-type: none"> Elucidating <i>Plasmodium knowlesi</i> malaria parasite preference to β-thalassemic erythrocytes in Malaysia; FRGS (FRGS: FP037-2024), 2024-2026: PI
Dr. Lee Wenn Chyau	<ul style="list-style-type: none"> Investigation on the susceptibility of <i>Aedes aegypti</i> to insecticides and dengue viruses after the infection of <i>Wolbachia</i>; FRGS (FRGS: FP026-2022), 2022 – 2025: PI Effect of Insulin-like Growth Factor Binding Protein 7 (IGFBP7) on the vascular pathobiology of malaria; UMREG (UMREG007-2023), 2024 – 2027; PI Effect of human periostin (OSF-2) on rosetting phenomenon and phagocytosis of <i>Plasmodium</i>-infected erythrocytes; ICGEB (IF057-2024), 2024 – 2026; PI Effect of human periostin (OSF-2) on the cytoadherence dynamics of malaria parasites within the host vasculature; Partnership Grant (MG041-2024), 2024 – 2025; PI
Dr. Tan Tiong Kai	<ul style="list-style-type: none"> Susceptibility assessment and insecticidal molecular resistance mechanism of neonicotinoid insecticides in <i>Aedes aegypti</i>; BKP (BKP017-2023-ECR), 2023 – 2025: PI Unravelling the anthelmintic mechanism of antilatotoxin B in multi-drug resistant <i>Haemonchus contortus</i>; FRGS(FRGS- FP039-2024), 2024 - 2026: PI
Dr. Arutchelvan Rajamanikam	<ul style="list-style-type: none"> Exploring the dynamic duo of <i>Blastocystis</i> sp. and intestinal bacteria in inflammation, oxidative damage and activating WNT signaling pathway for colorectal cancer (CRC) aggravation; BKP (BKP015-2023-ECR), 2023 – 2025: PI Development of a precision medicine approach for the eradication of <i>Blastocystis hominis</i> infection: a proof-of-concept study; (International fund: EMLES Bioventures, IF034-2024, 2024 – 2025; PI
Dr. Junaid Olawale Quazim	<ul style="list-style-type: none"> Zoonotic <i>Brugia filariasis</i> in Klang: a multi-faceted approach to prevalence, vectors, and transmission risk factors; BKP (BKP035-2023-ECR), 2023 – 2025: PI Evaluation of pyriproxyfen as a novel vector control against simian malaria; FRGS (FRGS:FP040-2024), 2024 - 2026: PI
Dr. Aida Syafinaz Mokhtar	<ul style="list-style-type: none"> DNA barcoding of <i>Pediculus humanus capitis</i> and characterization of its potential associated pathogens among underprivileged children; (FRGS: FP038-2024, 2024-2026): PI
Dr. Rajiv Ravi	<ul style="list-style-type: none"> Improved applications of space spray for <i>Aedes</i> resistant strains; (PPRN Fund, PPRN001A-2024/ PPRN001B-2024, 2024 - 2025): PI <i>Areca catechu</i> effervescent tablet against <i>Aedes</i> (Diptera:Culicidae); UM Living Labs Grant (LL2024JN2020), 2024 – 2025: PI
Dr. Tania Ivorra	<ul style="list-style-type: none"> Investigating the effects of fire and chemicals agents on postmortem interval estimation through a forensically important fly, <i>Synthsiomyia nudiseta</i>; BKP (just awarded), 2024 – 2025: PI

Amount of new research fundings secured in 2024: RM 2,635,616.69

Total amount of active grants in the department: RM 6,954,994.11

Protégé

In 2024, there were 33 active research projects handled by students of different programs and degrees, under the supervision of our principal investigators.

PhD students

No.	Name of candidate	Studentship registration number	Project title	Supervisor	Recruited year
1	Freddy Franklin A/L Anthony Joseph	17218454	Studies to elucidate the association between gut microbiome and immunity in persons with mental illness	Prof. Dr Suresh Kumar Dr. Arutchelvan Rajamanikam Associate Prof. Dr. Chandramathi A/P samudi @ Raju (Dept. Med Microbiology)	2020
2	Siti Waheeda Binti Mohd Zin @Zain	17020182/3	Epidemiology and study of candidate Neural Tube Defects gene variants in Malaysia	Dr. Wahib Atroosh Associate Prof. Dr. Azizi Abu Bakar (UKM) Prof. Dr. Nicholas Greene (UCL, UK) Dr. Noraishah Mydin Abd Aziz (UPM)	2020
3	Er Yi Xian	17169664/2	Epidemiology, skin microbiota and host genetics of common skin diseases (scabies and tinea) among Orang Asli	Prof. Dr. Yvonne Lim Assoc. Prof. Dr. Leslie Than Thian Lung (UPM) Dr. Azdayanti Muslim (UiTM)	2020
4	Shahhaziq Shahari	17219544/1	The biodiversity of <i>Plasmodium knowlesi</i> in wild macaques from Peninsular Malaysia and the establishment of a <i>Plasmodium knowlesi</i> in vitro culture	Prof. Dr. Lau Yee Ling	2020
5	Nur Zulaikha Binti Zulkefli	S2135943/1	In vitro and ex vivo anti-plasmodial activity of <i>Vernonia amygdalina</i> against <i>Plasmodium knowlesi</i>	Prof. Dr. Lau Yee Ling Dr. Cheong Fei Wen	2022
6	Eira Nurfarisha Binti Mohd Latif	17116098/2	Genetic diversity and erythrocyte binding phenotypes of <i>Plasmodium cynomolgi</i> duffy binding protein 2 and reticulocyte binding protein 1A	Prof. Dr. Fong Mun Yik Dr. Cheong Fei Wen Prof. Dr. Lau Yee Ling	2022
7	Rishitharan A/L Subramaniam	17093309/3	Evaluation of the effect of genetic polymorphisms in <i>Plasmodium knowlesi</i> duffy binding protein alpha on parasite survival using CRISPR-Cas9	Dr. Cheong Fei Wen Prof. Dr. Lau Yee Ling	2024
8	Muhammad Hafizu Sulaiman	23076795/1	Exploring vector dynamics, host variability, and transmission risk factors of zoonotic <i>Brugia filariasis</i> in Klang Valley, Malaysia	Dr. Junaid Olawale Quazim Prof. Dr. Lau Yee Ling	2024
9	Chin Joo Yie	U2004192/2	Effect of Insulin-like growth factor binding protein 7 (IGFBP7) on the vascular pathobiology of malaria	Dr. Lee Wenn Chyau Prof. Dr. Lau Yee Ling Prof. Dr. Jamal I-Ching Sam (Dept. Med Microbiology)	2024
10	Zulhisham Zulzahrin	22058086/2	Vector biology characterization of <i>Wolbachia</i> -infected <i>Aedes aegypti</i>	Dr. Lee Wenn Chyau Prof. Dr. Lau Yee Ling Prof. Dr. Jamal I-Ching Sam (Dept. Med Microbiology)	2024

MSc (research mode) students

No.	Name of candidate	Studentship registration number	Research project	Supervisor	Recruited year
1	Nisheljeet Singh A/L Jogineder Singh	S2029043/1	Rescue of mouse neural tube defects in a chemical and genetic model of spina bifida and its implication on human spina bifida pathophysiology	Prof. Dr. Lau Yee Ling Prof. Dr. Dharmendra A/L Ganesan (Dept. Surgery) Associate Prof. Dr. Ramalinggam Rajamanickam (UKM)	2020
2	Nurmanisha Majid	S2131964/1	Co-infection of soil-transmitted helminth infections and malaria among indigenous communities in Malaysia	Prof Dr. Yvonne Lim Ai Lian Dr. Yap Nan Jiun	2022
3	Tan Khee Hui	23060775/1	Investigating the gametocytogenesis of <i>Plasmodium knowlesi</i> (UM04 strain) <i>in vitro</i> under different stressing factors	Prof. Dr. Lau Yee Ling Dr. Cheong Fei Wen	2023
4	Sheivanya Gayatri Kuppusamy	17205510/2	Studies to investigate the <i>Blastocystis</i> sp.-bacteria synergy in the aggravation of colorectal cancer	Dr. Arutchelvan Rajamanikam Associate Prof. Dr. Chandramathi A/P samudi @ Raju (Dept. Med Microbiology)	2024
5	Muhammad Luqman Nul-HaKIM Bim Rohaizad	23094543/1	Susceptibility assessment and insecticidal molecular resistance mechanism of neonicotinoid insecticides in <i>Aedes aegypti</i>	Dr. Tan Tiong Kai Prof. Dr. Yvonne Lim Ai Lian Associate Prof. Dr. Low Van Lun (TIDREC)	2024
6	Adriana Zahanuddin	22082834/1	DNA barcoding of <i>Pediculus humanus capitis</i> and characterization of its potential associated pathogens among underprivileged children	Dr. Aida Syafinaz Mokhtar Prof. Dr. Lau Yee Ling	2024
7	Zainab Rahman	23101492/1	Repellency of <i>Areca catechu</i> linn gel formulations against <i>Aedes</i> mosquitoes	Dr. Rajiv Ravi	2024
8	Sanjeevi Nair Gopalan	23087239/1	Elucidating <i>Plasmodium knowlesi</i> malaria parasite preference to β -thalassaemic erythrocytes	Dr. Wahib Atroosh Prof. Dr. Hesham al-Mekhlafi Prof. Dr. Lau Yee Ling	2024
9	Alya Zulaikha	24064268/1	Improved application of space spray for <i>Aedes aegypti</i> and <i>Aedes albopictus</i> resistant strain	Dr. Rajiv Ravi	2024
10	Lim Li Yang	24053327/1	Unravelling the anthelmintic mechanism of antillatoxin B in <i>Haemonchus contortus</i>	Dr. Tan Tiong Kai Prof. Dr. Yvonne Lim Ai Lian Associate Prof. Dr. Low Van Lun (TIDREC)	2024

MSc (coursework mode) students

Master of Medical Parasitology and Entomology Program

No.	Name of candidate	Studentship registration number	Research project	Supervisor	Year
1	Ling Sii Hui	23099222/1	Larval competition of two predatory necrophagous fly species, <i>Chrysomya rufifacies</i> and <i>Synthesiomyia nudiseta</i> : implications for forensic entomology	Dr. Tania Ivorra	2024
2	Nurul Izzah Mohd Azmi	U2004972/2	<i>Areca catechu</i> effervescent tablet larvicidal effects on <i>aedes aegypti</i> laboratory strains	Dr. Rajiv Ravi	2024

BSc students (FYP projects)

Biomedical Science Program, Universiti Malaya

No.	Name of candidate	Studentship registration number	Research project	Supervisors	Recruited year
1	Daniyah Nazatulsheedah binti Malan	U2002267/2	Identification of <i>Acanthamoeba</i> sp. from hospital water reservoirs and its pathogenicity assessment	Dr. Arutchelvan Rajamanikam	2024
2	Anisha Zanirah binti Azham	U2001780/2	Genetic diversity of <i>Blastocystis</i> sp. derived <i>HSP70</i> gene due to host variation and its pathogenic links	Dr. Arutchelvan Rajamanikam	2024
3	Nur 'Alani Fatini binti Mad Shahmiour	U2001576/2	Studies to assess response of <i>Blastocystis</i> sp. to bacterial solubilised antigens and spent media	Dr. Arutchelvan Rajamanikam	2024
4	Amal Hayati Binti Ahmad Zaki	U2001860	Infection study of <i>Anopheles cracens</i> mosquito with <i>Plasmodium knowlesi</i> <i>in vitro</i> culture	Prof. Dr. Lau Yee Ling Dr. Cheong Fei Wen	2024
5	Norsyafiqah Binti Ahmad Safri	U2001673/2	Plant extracts from Iran: Investigation on their <i>in vitro</i> anti-malarial properties	Dr. Cheong Fei Wen Prof. Dr. Lau Yee Ling	2024
6	Nur Suhaila Najwa binti Saiful Anuar	U2001797/2	Preliminary Investigation on the Insecticide Resistance Status of <i>Ae. aegypti</i> and <i>Ae. albopictus</i> mosquitoes from Kuala Lumpur and Selangor Region	Dr. Rajiv Ravi Dr. Cheong Fei Wen	2024
7	Nor Alif Haikal Bin Norza	U2001662/2	Molecular monitoring of knockdown resistance alleles in head lice populations of Orang Asli	Dr. Aida Syafinaz Mokhtar	2024
8	Liew Suet Yee	U2104645/1	Seroprevalence of <i>Toxoplasma gondii</i> infection among Orang Asli communities in Peninsular Malaysia	Dr. Stanley Tan Tiong Kai	2024
9	Lim Zi Hui	S2112735/1	Detection of <i>Rickettsia</i> spp. in fleas collected from stray cats in the Klang Valley	Dr. Stanley Tan Tiong Kai	2024
10	Nurul Aini Bin Ibrahim	U2002065/2	Detection of <i>Dipylidium caninum</i> in the fleas collected from stray cats in the Klang Valley	Dr. Stanley Tan Tiong Kai	2024
11	Nurul Nabila binti Rosli	U2001721/2	Establishment of Room-temperature stable and ready-to-use loop-mediated isothermal amplification assay for on-site malaria diagnosis	Prof. Lau Yee Ling Dr. Lai Meng Yee	2024

Publications (15 Dec 2023 – 31 Dec 2024)

1. Wan Nazri, W. S. M., Lau, Y.L., Cheong, F.W. (2023) Detection of *Plasmodium knowlesi* in whole blood samples with sandwich enzyme-linked immunosorbent assay (ELISA) using rhoptry-associated protein 1 specific polyclonal antibodies. *Journal of Vector Borne Diseases*. doi: 10.4103/0972-9062.392262.
2. Syahri J, Hilma R, Ali AH, Ismail N, Ng YL, Nurlaili, Nurohmah BA, Agustar HK, Lau YL, Latip J. (2023) Chalcone Mannich based derivatives: synthesis, antimalarial activities against *Plasmodium knowlesi*, and molecular docking analysis. *RSC Advances* 13: 36035-36047. doi: 10.1039/d3ra05361j.
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10. Olsen K, Li L, Pusadee T, Wedger M, Li Y, Li M, Lau YL, Yap S, Jamjod S, Rerkasem B, Song B, Hao Y. (2024) Porous borders at the wild-crop interface promote weed adaptation in Southeast Asia. *Nature Communications* 15:1182. doi: 10.1038/s41467-024-45447-0.
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12. Thau NS, Nguyen KT, Truong NV, Chu TH, Na S, Moon RW, Lau YL, Hyunt MH, Park WS, Chun W, Lu F, Lee S, Han J, Han E. (2024) Characterization of merozoite-specific thrombospondin-related anonymous protein (MTRAP) in *Plasmodium vivax* and *P. knowlesi* proteins. *Frontiers in Cellular and Infection Microbiology* 14:1354880. doi: 10.3389/fcimb.2024.1354880.
13. Shahari S, Abdullah ML, Isman Rohimiy AA, Asharat N, Amir A, Atroosh WMM, Fong MY, Lau YL. (2024) The prevalence of simian malaria in wild long-tailed macaques throughout Peninsular Malaysia. *Scientific Reports* 14: 6023. doi: 10.1038/s41598-024-54981-2.
14. Azlan UW, Cheong FW, Lau YL, Fong MY. (2024) Inhibition of *Plasmodium knowlesi* merozoite invasion into human erythrocytes by antibodies raised against the parasite's secreted protein with altered thrombospondin repeat (SPATR). *Tropical Biomedicine* 41:190-195. doi: 10.47665/tb.41.2.009.
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17. GBD 2021 Fertility and Forecasting Collaborators* (2024). Global fertility in 204 countries and territories, 1950–2021, with forecasts to 2100: a comprehensive demographic analysis for the Global Burden of Disease Study 2021. *Lancet*. doi: 10.1016/S0140-6736(24)00550-6. Al-Mekhlafi HM is one of the GBD 2021 Fertility and Forecasting Collaborators.
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20. GBD 2021 Causes of Death Collaborators* (2024). Global burden of 288 causes of death and life expectancy decomposition in 204 countries and territories and 811 subnational locations, 1990–2021: a systematic analysis for the Global Burden of Disease Study 2021. *Lancet*, S0140-6736(24)00367-2. Advance online publication. doi:10.1016/S0140-6736(24)00367-2. Al-Mekhlafi HM is one of the GBD 2021 Causes of Death Collaborators.
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25. GBD 2021 Forecasting Collaborators* (2024). Burden of disease scenarios for 204 countries and territories, 2022 – 2050: a forecasting analysis for the Global Burden of Disease Study 2021. *Lancet* 403:2204–2256. doi: 10.1016/S0140-6736(24)00685-8. Al-Mekhlafi HM is one of the GBD 2021 Forecasting Collaborators.
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50. GBD 2021 Global Nutrition Target Collaborators*. (2024). Global, regional, and national progress towards the 2030 global nutrition targets and forecasts to 2050: a systematic analysis for the Global Burden of Disease Study 2021. *Lancet*, 404, 2543-2583. Al-Mekhlafi HM is one of the GBD 2021 Global Nutrition Target Collaborators.

Publications: summary

Name of Journal	IF by WoS	Rank by JIF category	Tier	Number of papers published
<i>Lancet</i>	98.4	Medicine, General & Internal: 1/329	Q1	7
<i>One Earth</i>	15.1	Environmental Sciences: 7/358	Q1	1
<i>Nature Communications</i>	14.7	Multidisciplinary Sciences: 8/134	Q1	1
<i>Microbiome</i>	13.8	Microbiology: 8/161	Q1	1
<i>Engineering Applications of Artificial Intelligence</i>	7.5	Engineering, Multidisciplinary: 5/181	Q1	1
<i>Alexandria Engineering Journal</i>	6.2	Engineering, Multidisciplinary: 9/181	Q1	1
<i>European Journal of Medicinal Chemistry</i>	6.0	Chemistry, Medicinal: 8/72	Q1	1
<i>Journal of Infectious Diseases</i>	5.0	Infectious Diseases: 11/132	Q1	2
<i>Frontiers in Cellular and Infection Microbiology</i>	4.6	Microbiology: 37/161	Q1	1
<i>European Journal of Nutrition</i>	4.1	Nutrition & Dietetics: 29/114	Q2	1
<i>International Journal of Health Policy and Management</i>	4.0	Health Policy & Services: 9/118	Q1	1
<i>RSC Advances</i>	3.9	Chemistry, Multidisciplinary: 80/231	Q2	1
<i>Scientific Reports</i>	3.8	Multidisciplinary Sciences: 25/134	Q1	4
<i>Evolutionary Applications</i>	3.5	Evolutionary Biology: 14/54	Q1	1
<i>Heliyon</i>	3.4	Multidisciplinary Sciences: 28/134	Q1	1
<i>IEEE Access</i>	3.4	Telecommunications: 47/119	Q2	1
<i>PLoS Neglected Tropical Diseases</i>	3.4	Tropical Medicine: 5/28	Q1	2
<i>Frontiers in Public Health</i>	3.0	Public, Environmental & Occupational Health: 115/408	Q2	1
<i>Parasites and Vectors</i>	3.0	Tropical Medicine: 6/28	Q1	1
<i>Food and waterborne parasitology</i>	2.9	Veterinary Sciences: 14/167	Q1	1
<i>Tropical Medicine and Infectious Disease</i>	2.8	Tropical Medicine: 7/28	Q1	1
<i>BMC Oral Health</i>	2.6	Dentistry, Oral Surgery & Medicine: 39/158	Q1	1
<i>BMJ Open</i>	2.4	Medicine, General & Internal: 81/329	Q1	1
<i>Acta Tropica</i>	2.1	Tropical Medicine: 12/28	Q2	5
<i>American Journal of Tropical Medicine and Hygiene</i>	1.9	Tropical Medicine: 14/28	Q2	2
<i>Journal of Applied Research in Higher Education</i>	1.9	Education & Educational Research: 212/760	Q2	1
<i>Parasitology Research</i>	1.8	Parasitology: 23/45	Q3	2
<i>Applied Entomology and Zoology</i>	1.3	Entomology: 51/109	Q2	1
<i>Tropical Biomedicine</i>	0.8	Tropical Medicine: 22/28	Q4	3
<i>Journal of Vector Borne Diseases</i>	0.8	Tropical Medicine: 22/28	Q4	1
<i>Asia Pacific Journal of Molecular Biology & Biotechnology</i>	N/A	N/A	N/A	1

Other Publications

PULSE@UM

Cover Story

The GUT MICROBIOTA as a Promising Treatment Target for Physical and Mental Illness

Aruthehvan Rajamanikam
Department of Parasitology

Freddy Franklin
Department of Parasitology

More than 2000 years ago, Hippocrates, the father of modern medicine, stated 'all diseases begin in the gut'. But it took us such a long time with the assistance of sophisticated technologies to realize the same. It all starts from the gut, and the gut is the most influential organ in the human system and the most underplayed in the medical arena. It holds the capability to influence almost every other organ including the brain.

So how did the gut gain such superpower? The gut houses trillions of microorganisms that are diverse with over 1000 different species. This myriad of microorganisms inclusive of bacteria, fungi, and eukaryotes have evolved alongside humans and have now outnumbered to be at least 10 times more than the total human cells. We are only becoming more human when we shed some of these microorganisms during bowel movement.

This legion of gut microbes is collectively known as the gut microbiota, and they play an integral role in digestion and metabolism to

12. PULSE@UM_YEAR 2024_ISSUE 1

Cover Story

A Multi-pronged Approach in Combating Knowledge Malaria

Cheong Fei Wen
Department of Parasitology

Lai Meng Yee
Department of Parasitology

Lau Yee Ling
Department of Parasitology

Malaria, a disease caused by *Plasmodium* spp. via an *Anopheles* mosquito bite, led to 249 million cases and 608,000 deaths worldwide in 2022. Malaysia has reported zero indigenous cases of human malaria for five consecutive years since 2018. However, *Plasmodium knowlesi*, which originates from monkeys, is now the leading cause of human malaria cases, with 2500 cases and nine deaths reported in 2022. Malaysia is now the predominant source of *knowlesi* malaria, contributing to 90.5% of global human *knowlesi* cases. The way forward in

Special Event

20. PULSE@UM_YEAR 2024_ISSUE 3

Grooming Early Career Researchers to Become Principal Investigators at the Faculty of Medicine

Lee Wenn Chyau
Department of Parasitology

Rubrica FOM Bulletin

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DEPARTMENT OF PARASITOLOGY JOURNAL CLUB: BIOINFORMATICS FOR MICROBIAL GENOME EXPLORATION
by Freddy Franklin (Department of Parasitology)

The Department of Parasitology Journal Club recently organised a talk by Dr. Liew Kok Jun on 24th February 2024 titled 'Bioinformatics for Microbial Genome Exploration'. Dr. Liew started his presentation with describing the types of omics some basic one of Next

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HOME ABOUT STUDY DEPARTMENTS RESEARCH WELLNESS AND SUSTAINABILITY GIVING@FOM

EVENTS AND ACTIVITIES MAY 2024 | ISSUE #30

ZOOONOTIC PARASITOLOGY RESEARCH: A PERSONAL JOURNEY
Written by Dr. Zulainah bin Zulainah & Dr. Nur Zulainah bin Zulainah (Department of Parasitology)
Website: <https://www.medicine.um.edu.my/parasitology-department/>

On 23rd April 2024, the Department of Parasitology hosted a seminar titled 'Zoonotic Parasitology Research: A Personal Journey', presented by Prof. Dr. Fong Mun Yik, highlighting his research career on zoonotic parasitology for the past 25 years. Prof. Fong started his zoonotic research on established and traditional zoonoses, specifically *Toxocara canis* and *Toxoplasma gondii*, that are found in infected dogs and cats. He later moved on to 'emerging' *Toxocara canis* and *Toxoplasma gondii*, *Sarcocystis* spp., *Plasmodium knowlesi* and *P. cynomolgi*.

ZOOONOTIC MALARIA

An Insight into the Disease and Mosquito Vectors

NANTHA KUMAR JEYAPRAKASAM
INDRA VYTHILINGAM

INSIGHTS

7th International Conference on Molecular Biology and Biotechnology (ICMBB 2024) & 6th International Health Conference (IHEC 2024)

The 7th International Conference on Molecular Biology and Biotechnology and 6th International Health Conference 2024 took place recently on the 26 - 27 June 2024 at Universiti Sains Islam Malaysia. The conference was attended by 206 participants from Malaysia, China, Taiwan, Singapore and Indonesia. Of the 206 participants, 39 took part as oral presenters whereas another 70 took part as poster presenters.

The highlight of the conference included the insightful keynote sessions by Professor Dato' Dr. Muhammad Taufik Mohd Noor, the Deputy Vice Chancellor for Research and Innovation, Universiti Sains Islam Malaysia and Academician Dato' Dr Tengku Mohd Azzam Shariiffadeen FASc, President of Academy of Sciences, Malaysia. The keynotes of each day was then followed by the informative talks by our 11 plenary and invited speakers from Malaysia, Taiwan and Singapore, and by the oral presentation session, taking place in two separate halls. The participants were also treated to a number of lucky draw sessions and a booth hunt competition with cash prizes to be won. The posters from the participants were displayed over the 2-days period at the adjacent dining hall, whereby attendees and judges were able to ponder on, over a cup of tea/coffee.

Even though things were not always smooth sailing, with ups and downs here and there, the conference nevertheless with the closing and prize-giving ceremony at 7 PM on 27 June, where the winners of the oral presentations were announced.

The main conference hall

Attendees checking out the posters

Speech from President of ASM Academician Dato' Dr Tengku Mohd Azzam Shariiffadeen FASc.

The conference delegates from Indonesia

msptm.org/animal-awareness-day-2024/

MSPTM
Malaysian Society of Parasitology and Tropical Medicine

HOME ABOUT US MEMBERS JOURNAL EVENTS RESOURCES CONTACT US

The **Animal Awareness Day**, an annual event organized by the Department of Parasitology, Faculty of Medicine, Universiti Malaya (UM), was held on 25 May 2024 (Saturday), from 9:00 AM to 3:30 PM at the Center Point, Faculty of Medicine, UM. This year, this event was organized and chaired by (1) Dr. Stanley Tan Tiong Kai from the **Department of Parasitology, UM**; (2) Dr. Nor Azlina Abdul Aziz from the **Faculty of Veterinary Medicine, Universiti Putra Malaysia**; (3) **Malaysian Society of Parasitology and Tropical Medicine (MSPTM)**; and in collaboration with the **Department of Veterinary Services (DVS), Kuala Lumpur**. This event aimed to promote pet ownership, understanding of pets' behavior, and awareness about the prevention of zoonotic diseases under the theme **'Understanding Our Furry Friends and Protecting against Zoonotic Diseases'**. The event featured various booths focusing on common and zoonotic parasites infecting animals and humans, as well as promoting animal ethics and welfare. Activities included physical check-ups on cats, vaccination, and de-tick/flea and deworming services. The event saw participation from 48 individuals and 136 cats, including those brought by a cat rescuer.

MSMBB Horizon

MSPTM Web updates

Seminars

Proposal defense seminars

No.	Name of presenter	Title of presentation	Date
1	Tan Khee Hui	Investigating the gametocytogenesis of <i>Plasmodium knowlesi</i> (UM04 strain) <i>in vitro</i> under different stressing factors	22 Mar 2024

Candidature defense seminars

No.	Name of presenter	Title of presentation	Date
1	Er Yi Xian	Epidemiology of skin infections (scabies and tinea) among the Orang Asli in Peninsular Malaysia, their associations with skin microbiome and inclusion of Malaysian data in a novel database on skin microbiome	10 Jan 2024
2	Nurmanisha Binti Abdull Majid	Low density malaria and soil transmitted helminth infections among indigenous communities in Malaysia	10 Jan 2024
3	Nur Zulaikha Binti Zulkefli	<i>In vitro</i> and <i>ex vivo</i> anti-plasmodial activity of <i>Vernonia amygdalina</i> against <i>Plasmodium knowlesi</i>	3 Jul 2024

Thesis seminars

No.	Name of presenter	Title of presentation	Date
1	Eira Nurfarisha Bt Mohd Latif	Genetic diversity of <i>Plasmodium cynomolgi</i> erythrocyte binding proteins in macaque isolates from Peninsular Malaysia and characterisation of their erythrocyte binding phenotype	3 Jul 2024
2	Er Yi Xian	Epidemiology of Skin Infections (Scabies and Tinea) and their associations with skin microbiome among the Negrito Orang Asli in Peninsular Malaysia	10 Jul 2024
3	Shahhaziq bin Shahari	The prevalence of simian malaria in long-tailed macaques from Peninsular Malaysia and the establishment of two new <i>Plasmodium knowlesi in vitro</i> lines	6 Nov 2024

Conversion seminars

No.	Name of presenter	Title of presentation	Date
1	Zulhisham Zulzahrin	Vector biology characterization of <i>Wolbachia</i> -infected <i>Aedes aegypti</i>	29 May 2024

Journal Clubs

NO.	NAME	TITLE	DATE
1.	Prof. Dr. Georges Snounou Visiting professor/ Research director, Université Pierre et Marie Curie, CIMI- Paris, France	The Two Cryptic Species of <i>Plasmodium ovale</i> (Breakfast@UMHealth)	17 Jan 2024
2.	Dr. Liew Kok Jun Codon Genomics Sdn. Bhd, Malaysia	Bioinformatics for Microbial Genome Exploration: From Identification to Antimicrobial Resistance Insights	29 Feb 2024
3.	Prof. Dr. Georges Snounou Visiting Professor Université Pierre et Marie Curie, CIMI- Paris, France	Two Malaria Vaccines That Have Been Recommended By The World Health Organization (WHO)(Rts,S And R21/Matrix-M)	13 Mar 2024
4.	Prof. Dr. Fong Mun Yik Department of Parasitology, Universiti Malaya	Zoonotic Parasitology Research: A Personal Journey	22 Apr 2024
5	Prof. Dr. Suresh Kumar Govind Department of Parasitology, Universiti Malaya	Seeking Joy at Workplace	15 May 2024
6	Dr. Thomas Stein Kraft Assistant Professor, University of Utah, USA Dr. Amanda Lea Assistant Professor, Vanderbilt University, USA	Orang Asli Health and Lifeways Project: Using Community Engaged Research to Improve the Health and Well-Being in Indigenous Communities	30 May 2024
7.	Ms. Wai Mun AGTC Genomics, Malaysia.	Advancing Genomic Research: Utilizing Whole Genome Sequencing in Complex Organisms	17 July 2024
8	Professor Dr. Agnes Kurniawan Fakultas Kedokteran, Universitas Indonesia, Indonesia	Mechanisms of Action of Artemisinin & Implications for Repurposing	22 Aug 2024
9	Prof. Dr. Uwen Friday Ekpo Federal University of Agriculture, Nigeria	Meet The Expert Session- Parasite Epidemiology, STH & Schistosomiasis	4 Oct 2024
10	Prof. Dr. Md. Hasanuzzaman Talukder, Bangladesh Agricultural University	Food-borne parasites and food safety in Southeast Asia	12 Nov 2024

Journal Clubs

UNIVERSITI MALAYA

Breakfast@UMHE

LIVE WEBINAR SERIES

The Two Cryptic Species of *Plasmodium*

Professor Georges Snounou
 Researcher Director
 Infectious Disease Models for Innovative Therapies (IDMIT)
 Université Pierre et Marie Curie
 Clodigny, Paris, France

Dr. Arutchehvan Rajamanikam
 Senior Lecturer
 Department of Parasitology
 Faculty of Medicine, Universiti Malaysia

UNIVERSITI MALAYA

Co-orga

FAKULTI PERUBATAN
 Faculty of Medicine

Bioinformatics for Microbial Genome Exploration:

From Identification to Antimicrobial Resistance Insights

Journal Club@ Department of Parasitology
 Faculty of Medicine

Food-borne parasites and food safety in Southeast Asia

by **Prof. Md. Hasanuzzaman Talukder**
 Bangladesh Agricultural University

Date: 12 November 2024
 Time: 12:00 pm
 Venue: Dewan CP Ramachandran,
 Department of Parasitology, FOM,
 UM

[CLICK HERE](#) For Microsoft Teams

Journal Club@ Department of Parasitology
 Faculty of Medicine

Advancing Genomic Research: Utilizing Whole Genome Sequencing in Complex Organisms

17TH JULY, 2024
 10:00AM
 HYBRID (MICROSOFT TEAMS)
 DEWAN CP RAMACHANDRAN
 DEPARTMENT OF PARASITOLOGY, FACULTY OF MEDICINE, UM

To join us: **BY: MS. WAI MUN**

[CLICK HERE](#)

UNIVERSITI MALAYA

FAKULTI PERUBATAN
 Faculty of Medicine

MEET THE EXPERT SESSION

4th October, 2024
 11.00am
 Dewan CP Ramachandran

PROF UWEM FRIDAY EKPO
 Expert in Parasite Epidemiology, STH & Schistosomiasis

29 FEB 2024

About the Webinar

The intricate dynamics of medical microbiology and bacteriology have been revolutionized by the synergistic fusion of multi-omics techniques and bioinformatics. This talk delves into the realm of "Bioinformatics for Microbial Genome Exploration: From Identification to Antimicrobial Resistance Insight," elucidating the transformative potential of integrating genomics, transcriptomics, and metagenomics.

We navigate through the layers of microbial diversity, gene expression patterns, functional proteins, and metabolic pathways, all of which come into focus with the aid of bioinformatics tools. This convergence of approaches provides a holistic understanding of microbial systems and their capability to resist antimicrobial drugs, offering avenues for personalized medicine, novel therapeutic interventions, and early disease detection. The webinar undertakes pursuit, inviting interdisciplinary engagement in microbial existence.

VENUE:
 Microsoft Teams

Journal Club@ Department of Parasitology
 Faculty of Medicine

GENES THAT HAVE BEEN IDENTIFIED BY THE INTERNATIONAL WORKING GROUP ON ANTIMICROBIAL RESISTANCE (WHO) MATRIX-M)

12 FEBRUARY 2024
 12:00 pm

Department of Parasitology,
 Faculty of Medicine, Universiti Malaysia

[CLICK HERE](#)

Seeking Joy at Workplace

Prof. Dr. Suresh Kumar Govind
 Professor
 Department of Parasitology
 Faculty of Medicine, Universiti Malaysia

Dr. Arutchehvan Rajamanikam
 Senior Lecturer
 Department of Parasitology
 Faculty of Medicine, Universiti Malaysia

Journal Club@ Department of Parasitology
 Faculty of Medicine

CHALLENGES & EXPERIENCE OF CLINICAL PARASITOLOGY IMPLEMENTATION

Orang Asli Health: Using community-based approaches to improve the health of indigenous populations

30 May 2024
 10.00am - 11.00am

Dr. Thomas Kraft
 Assistant Professor
 Department of Anthropology
 University of Utah, USA

Dr. Amanda Lea
 Assistant Professor
 Department of Biological Sciences
 Vanderbilt University, USA

To join virtually (MS Teams)
[CLICK HERE](#)

Journal Club@ Department of Parasitology
 Faculty of Medicine

ABOUT THE SPEAKER

Dr Liew Kok J
 graduate from
 Teknologi Malaysia
 seasoned in
 microbiology, genomics, and bioinformatics
 in analyzing diverse environmental samples
 in microbial genome, transcriptome, a
 shotgun metagenomics analysis. Currently
 into machine learning and AI-guided
 extending his research into environmental
 agriculture, and horticulture.

Journal Club@ Department of Parasitology
 Faculty of Medicine

TWO MALARIA VACCINES HAVE BEEN RECOMMENDED BY THE WORLD HEALTH ORGANIZATION (WORLD HEALTH ORGANIZATION) (RTS,S AND R21)

13 March 2024
 12.00 - 1.00 pm

Venue:
 Dewan CP Ramachandran, Department of Parasitology, Faculty of Medicine, Universiti Malaysia

By:
 Prof. Georges Snounou
 Institut Pasteur
 Paris, France

Journal Club@ Department of Parasitology
 Faculty of Medicine

ZOOONOTIC PARASITOLOGY RESEARCH: A PERSONAL JOURNEY

22 APRIL 2024
 12.00 - 1.00 PM

By
Prof. Dr. Fong Mun Yik
 Department of Parasitology
 Faculty of Medicine
 Universiti Malaysia

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Journal Club@ Department of Parasitology
 Faculty of Medicine

JOIN US TO LEARN MORE ON CLINICAL PARASITOLOGY!

+60379674745 Department of Parasitology, UM

Journal Club@ Department of Parasitology
 Faculty of Medicine

ABOUT THE SPEAKER

Dr. Fong Mun Yik
 Senior Lecturer
 Department of Parasitology
 Faculty of Medicine, Universiti Malaysia

Journal Club@ Department of Parasitology
 Faculty of Medicine

ZOOONOTIC PARASITOLOGY RESEARCH: A PERSONAL JOURNEY

22 APRIL 2024
 12.00 - 1.00 PM

By
Prof. Dr. Fong Mun Yik
 Department of Parasitology
 Faculty of Medicine
 Universiti Malaysia

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Journal Club@ Department of Parasitology
 Faculty of Medicine

Orang Asli Health: Using community-based approaches to improve the health of indigenous populations

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 10.00am - 11.00am

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Dr. Amanda Lea
 Assistant Professor
 Department of Biological Sciences
 Vanderbilt University, USA

To join virtually (MS Teams)
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Highlights of key activities in year 2024

Date	Activity description
29 Jan – 2 Feb 2024	Advancing Evidence-informed Policy in Southeast Asia Region (ADVISE) Project- Evidence-informed Health Policy Workshop 2024 by the Center for Tropical Medicine and WHO_TDR: Dr. Lee Wenn Chyau (invited participant)
21 – 22 Feb 2024	DTMH Microscopy Training by University of Glasgow and Universiti Malaya – Kuala Lumpur station; coordinated by: Dr. Dr. Lee Wenn Chyau , facilitator: Mr. Donald Ross (<i>University of Glasgow, UK</i>).
24 – 25 Feb 2024	Education Malaysia Fair, Qatar; MMPE program promoter: Dr. Aida Syafinaz Binti Mokhtar
22 Mar 2024	Malaysian Society of Parasitology & Tropical Medicine (MSPTM): Dr. Tan Tiong Kai appointed as honorary secretary
1 Apr – 24 Sep 2024	National Science Challenge 2024 by ASM & MOSTI: Dr. Arutchelvan Rajamanikam (organizing committee)
23 Apr 2024	Anugerah Cemerlang Universiti Malaya (ACUM): Pn. Sharifah Nor Akmar Binti Syed Mohd (Anugerah khas: Pemberlajaran Sepanjang Hayat)
25 May 2024	The 11 th Animal Awareness Day 2024, chaired by: Dr. Tan Tiong Kai
12 July 2024	"Tropical Medicine & Beyond" summer module 2024 by University of Nottingham Malaysia: Dr. Wahib Atroosh & En. Mohd Redzuan Ahmad Naziri (invited instructors)
29 July 2024	"Igniting Mission-oriented Mindset in Malaysian Young Scientists" programme by YSN-ASM: Dr. Arutchelvan Rajamanikam (invited participant)
19 – 23 Aug 2024	Master of Medical Parasitology & Entomology Program evaluation by external assessor; programme coordinator: Dr. Cheong Fei Wen
26 – 30 Aug 2024	International Malaria Workshop 2024, chaired by: Prof. Dr. Hesham Mahyoub Sarhan Al-Mekhlafi
4 Sep 2024	The launching of Wellness @ FOM Yogaflex classes, coordinated by: Dr. Karshini A/P Jeya Pirathaba
13 Sep 2024	Anugerah Perkhidmatan Cemerlang (APC): Dr. Cheong Fei Wen Sijil Perkhidmatan Cemerlang (SPC): En. Mohd Redzuan Ahmad Naziri
19 – 23 Sep 2024	The 21 st International Congress for Tropical Medicine and Malaria (ICTMM) 2024: Prof. Dr. Yvonne Lim Ai Lian (organizing committee – scientific; winner of the Sandosham Medal) Prof. Datin Dr. Indra Vythilingam (plenary speaker) Prof. Dr. Lau Yee Ling (organizing committee – social event; sub-committee of “monster inside me” challenge – ICTMM Quiz) Dr. Tan Tiong Kai (organizing committee - scientific) Dr. Arutchelvan Rajamanikam (organizing committee – sub-committee of “monster inside me: challenge-ICTMM Quiz)
16 – 17 Oct 2024	The 2 nd International Conference on Tropical Sciences 2024 (TropSc 2024): Prof. Dr. Fong Mun Yik (organizing committee – scientific_ head of tropical medicine subcommittee) Prof. Dr. Lau Yee Ling (organizing committee – scientific_ tropical medicine subcommittee member) Dr. Cheong Fei Wen (organizing committee – scientific_ tropical medicine subcommittee member) Dr. Wahib Atroosh (organizing committee – scientific_ tropical medicine subcommittee member, judge of poster presentation competition) Dr. Lee Wenn Chyau (organizing committee – scientific_ tropical medicine subcommittee member, judge of oral presentation competition)
19 Oct 2024	International Parasitology Quiz 2024, chaired by: Dr. Junaid Olawale Quazim (Dept. Parasitology, FOM, UM)
23 – 24 Oct 2024	The 2 nd Open Science Forum by UM Open Science and Open Science Erasmus+ Project: Dr. Arutchelvan Rajamanikam (organizing committee, emcee)
5 – 7 Nov 2024	World Health Organization (WHO) - Global Malaria Programme Technical Consultation on control of zoonotic malaria, Geneva, Switzerland: Prof. Datin Dr. Indra Vythilingam (consultant) & Prof. Dr. Lau Yee Ling (consultant)
10 Nov 2024	Appointment of YSN-ASM affiliate member: Dr. Arutchelvan Rajamanikam

Limelight



Limelight



Penyelidik Universiti Malaya (UM) yang telah berjaya menerima Skim Geran Penyelidikan Fundamental (FRGS) 2024

Feat DR. KARSHINI
WELLNESS @FOM
YOGAFLEX
FIND YOUR INNER BALANCE



Fakulti Perubatan



Prof. Dr. Azlina Binti Abdul Aziz
Dr. Thamil Selvee A/P Ramasamy
Prof. Madya Dr. Chang Li Yen
Prof. Madya Dr. Puah Suat Moi
Dr. Kee Boon Pin
Dr. Wahib Mohammed Mohsen Atroosh
Dr. Aida Syafinaz Binti Mokhtar
Dr. Tan Tiong Kai
Dr. Junaid Olawale Quazim



Fomace, K.M., Laporta, G.Z., Vythilingam, I., Chua, T.H., Chua, R.H., Ahmed, K., Jayaprakasham, N.K., Duarte, A., Amir, A., Drakeley, C., Sallum, M.A.M., & Lau, Y.L. (2023). Simian malaria: A narrative review on emergence, epidemiology and malaria elimination. *Lancet Infectious Diseases*, 23(12), E520-E532. [https://doi.org/10.1016/s1473-3099\(23\)00298-0](https://doi.org/10.1016/s1473-3099(23)00298-0)



Dr Cheong Fei Wen
Excellent Service Award (APC)
En. Mohd Redzuan Bin Ahmad Naziri
Excellent Service Certificate (SPC)



Celebrating Research Success: Congratulations Prof Lau and Datin Prof Indra for obtaining the ICEMR Grant

to the FOM Researchers Listed Among the World's Top 2% Scientists in 2024
Recognized by Stanford University and featured in the Elsevier Data Repository

Professor Dr Lau Yee Ling FASc
Department of Parasitology
Faculty of Medicine
Universiti Malaya
50603 Kuala Lumpur

Department of Parasitology

- Professor Dr. Lau Yee Ling
- Datin Professor Dr. Indra a/p Vythilingam
- Professor Dr. Yvonne Lim Ai Lian
- Professor Dr. Hesham Mahyoub Sarhan Al-Mekhlafi



Dear Professor Dr Lau,

RECOGNITION AS THE 2024 TOP RESEARCH SCIENTISTS MALAYSIA

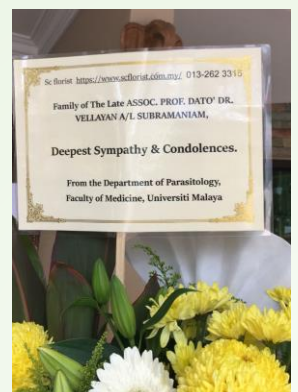
We are delighted to formally confirm that you have been selected as a **2024 Top Research Scientists Malaysia (TRSM)**. This recognition reflects your outstanding contributions and


Remembrance

Associate Prof. Dato' Dr. Vellayan Subramaniam 1952 - 2024



Dr. Vellayan was a trained veterinarian. Upon the completion of his MSc in Primate Nutrition in 1981, he joined the national zoo of Malaysia as a veterinarian, where he served for 28 years in various leadership roles within the institute, earning him the recognition as the “longest serving zoo veterinarian” in the Malaysian Book of Records. Dr. Vellayan was also active academically, lecturing in MAHSA University and UiTM over the past few years. Besides, Dr. Vellayan was one of the long-time research collaborators with many principal investigators in the Department of Parasitology, Faculty of Medicine, Universiti Malaya. Through the years, he actively and happily participated and contributed to many events organized by the department. Dr. Vellayan donated various valuable specimens to educational institutions, benefiting students of these institutions greatly. His knowledge, experience, and caring nature for animals inspired many younger researchers in the field of life sciences. *Heroes come and go, but legends are forever.*





Istiadat *Kanwakesyen* 64

Convocation Ceremony
30 November - 8 Disember 2024
Dewan Tunku Canselor

Graduates attended the 64th convocation ceremony of Universiti Malaya, 2024

PhD

- Dr. Ng Yee Ling
- Dr. Tan Pei Yee
- Dr. Naqib Rafieqin Bin Nordin
- Dr. Lee Phone Youth @ Zen Lee
- Dr. Tan Jia Hui
- Dr. Phang Wei Kit

MSc (research)

- Siti Farah Norasyikeen Binti Sidi Omar
- Syahirah Nadiah Binti Mohd Johari
- Wan Siti Maryam Binti Wan Nazri

MSc (Master of Medical Parasitology and Entomology Program)

- Nabil Mohamed Suliman
- Nur Farahain Ismail
- Norhayati Awang The
- Nurul Farah Nadia Rusly
- Nur Nadiah Binti Bakar

Congratulations!

Newsletter Editorial Board

Editor

Dr. Lee Wenn Chyau

Acknowledgements

En. Awang Bhukhari Bin Matsat

En. Muhammad Nabil Fikri Hashim



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UNIVERSITI MALAYA MASTER OF MEDICAL PARASITOLOGY AND ENTOMOLOGY

ONE-YEAR MASTER DEGREE BY COURSEWORK



WHY US?

THE UNIQUENESS OF THE PROGRAMME ARE:

- Completion in ONE year
- Affordable (Local RM35k; International USD 15k)
- Renowned and highly experienced faculty
- Guided hands-on practical sessions
- Engaging and interactive learning sessions
- Exhaustive and informative details on major parasites of medical importance and their vectors
- A multi-disciplinary approach towards understanding the role and relationship of parasites, vectors and humans
- Opportunities to gain practical insights on best practices in control and prevention from different countries
- Includes cutting-edge methods and approaches in research
- Expert supervision on research project
- A gateway towards PhD level programme



More information:
Department of Parasitology
Faculty of Medicine
Universiti Malaya
Tel: +60379674745
Email: ketua_parasit@um.edu.my



Some of the subjects that will be covered:

- o Global trends of parasitic infections
- o Climate change, population migration and movement
- o Hygiene hypothesis
- o Policy formulation
- o Cutting edge techniques
- o Hands-on *in-vitro* culture techniques
- o Parasite-microbiota interactions
- o Genomic and post-genomic advancement
- o Parasite omics
- o Hybridoma antibody
- o Imaging toolbox
- o Geographical information system
- o Data interpretation techniques
- o Epidemiology of major parasitic infections
- o Parasites and autoimmune, cancer and neurological diseases
- o Emerging and opportunistic parasites
- o Innovative control and preventive measures
- o Applied entomology
- o Advanced molecular tools
- o Field techniques
- o Bionomics of vectors
- o Insecticide and drug resistance

ACCEPTING APPLICATIONS FOR SEPTEMBER INTAKE

We welcome all Bachelor's degree holders (related or non-related to Health, Science, or Biology) to apply for this programme, with terms and conditions apply.

More information:

<https://medicine.um.edu.my/master-of-medical-parasitology-and-entomology>
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Tel: +60379674745 Email: ketua_parasit@um.edu.my

Website:

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