UNIVERSITY OF MALAYA

# FACULTY of MEDICINE

## DEPARTMENT of PARASITOLOGY

## NEWSLETTER 2021

The Department of Parasitology, Faculty of Medicine, Universiti Malaya is a very active department managed by 30 staff members including 13 academic lecturers, probably one of the largest staffed Parasitology Department in the world. There are three main core functions of the department: teaching, research and diagnostic service. The Department is responsible for teaching Medical Parasitology to the second year pre-clinical MBBS students. Other main courses include Diploma in Nursing and Medical Laboratory Technology, Bachelor of Biomedical Science, Bachelor in Pharmacy, Master of Pathology (MPath) and Master of Public Health (MPH). The Department will also launch a new one-year master program by coursework (Master of Medical Parasitology and Entomology) that will commence in September 2022 (*refer to page 32-33*). The Department attracts local and international postgraduate students and to date have helped graduate hundreds of Master and PhD students. Our vision is to be the Centre of Excellence for research, innovation, publication and teaching in Parasitology.

# Prof. Dr. Lau Yee Ling
# Head of Department


## *Foreword*

First, I would like to express my gratitude to all who have been involved and contributed to the preparation of this newsletter headed by Dr Wahib Atroosh. The Department of Parasitology, Faculty of Medicine, Universiti Malaya is committed to provide excellent education to our undergraduate and postgraduate students and conduct research that will benefit our patients and the communities. Over the years, the department has unleashed hundreds of post-graduate students, over and above the training conferred to students by the expected medical and bio-medical programs by very high calibre and distinguished Parasitologists. The Department has been consistently ranked among the top five departments for research and innovation. Despite the COVID19 pandemic, the Department's compassion for contribution has generated seminars and meetings with private and public stakeholders to provide critical information and resources in response to infectious diseases and their socioeconomic consequences to the community. Our students and lecturers have won multiple local and international research awards for their excellent works. Assessing the global parasitological situation, we are also proud to launch a new master programme - Master in Medical Parasitology and Entomology. This is a one-year programme to commence from September 2021 which will be offered to all national and international students aiming to cultivate talented educationists and researchers who are true professionals in modern tropical medicine. We now have five professors, three associate professors and four senior lecturers and one lecturer. Our research focuses on several areas, such as protozoa, nematodes, dengue viruses and medically important mosquitoes, with emphasis placed on both modern and traditional tropical medicine. The Department was the second runner-up for highest publication among all departments (non-clinical), Faculty of Medicine, UM in 2021 with a ratio of 3.6 publications per academic staff (as of 31st December 2021).

# ACADEMIC STAFF

## PROF DR. LAU YEE LING


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- **Malaria**
- **Diagnostic Parasitology**
- **Molecular cloning & Expression**

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. 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 200 ISI journals, with total citations index of 2598 and H-index of 27. 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 17 PhDs have completed their studies with success under her guidance. Currently, they are 4 Masters and 8 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. Through her contribution to the field of science, she is a regular reviewer for a few international journals such as Nature Scientific report, Lancet, PLOS One, Parasites & Vectors, Malaria Journal, International Journal of Tropical Disease & Health and others. With her extensive experience and reputation in the field of molecular parasitology, Professor Lau has been much sought after as speaker and consultant both locally and internationally. 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. Recently, she has been actively participating in organizing PBL training workshops for UMMP program. Professor Lau has been awarded 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.

# ACADEMIC STAFF

## PROF DR. SURESH KUMAR GOVIND


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- Blastocystis
- Drug trials & parasites biology
- Diagnostic parasitology

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.

# ACADEMIC STAFF

## PROF DR. FONG MUN YIK


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- **Genetic diversity and molecular & epidemiology of malaria parasites**
- **Diagnostic parasitology**

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.

# ACADEMIC STAFF

## PROF DR. YVONNE LIM AI LIAN


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- **Protozoa & Helminth**
- **Gut Microbiota**
- **Indigenous Health**
- **Molecular Epidemiology**
- **Waterborne Parasites *(Cryptosporidium, Giardia)***

Dr. Yvonne Lim Ai Lian is a senior professor at the Department of Parasitology, Faculty of Medicine, Universiti Malaya (UM), Kuala Lumpur and a fellow of the Academy of Sciences Malaysia. Currently, she is the Director of International Relations Office (IRO), UM and serves on the University Senate. She was the former Deputy Dean (Research) of Faculty of Medicine, UM and the past president of the Malaysian Society of Parasitology and Tropical Medicine (MSPTM).

Her research focuses on host-parasite interactions and the epidemiology and control of neglected tropical diseases primarily among the underserved and indigenous communities. Her work has been funded by various national and international grants (e.g. NIH). In her pursuit to better understand and control these diseases, her team has developed and evaluated time- and cost-effective solutions, such as multi-hits health education packages, rapid molecular diagnostics and provision of spatial distribution maps using geographic information system (GIS). In recent years, there is also a growing interest that some parasites such as helminths (worms) may play a role in the future treatment of inflammatory diseases. Using multidisciplinary advance approaches, her team's landmark publication with collaborators from New York University in *Science* unravelled the mechanisms of how low levels of helminth infection promote growth of probiotic gut microbiota. Her team is currently collaborating with researchers at the National Institutes of Health (NIH), USA to further elucidate the role of gut microbiota-helminth associations and the effects of this relationship on other non-communicable diseases.

She has published more than 200 scientific papers, 9 book chapters and 3 books. She has a vast network of local and international partnerships. She was a visiting fellow at the Department of Veterinary Science, University of Melbourne, Australia and was appointed a visiting professor at the Department of Molecular Parasitology and Tropical Diseases, Taipei Medical University, Taiwan. She is currently an international member of the Scientific Advisory Committee (SAC) in the Infectious Diseases Data Observatory (IDDO) Schistosomiasis and Soil-Transmitted Helminthiasis Data Treatment Platform which provides independent scientific expertise, guidance and support. She is also involved in the formulation of the National Policy for the Development of Orang Asli (Indigenous) with the Department of Orang Asli Development (JAKOA), Malaysia.

Dr. Yvonne Lim has been a panel member of evaluators for various national and selected international research grant schemes. She has received numerous awards and recognitions, among which were the Royal Society of Tropical Medicine and Hygiene (RSTMH) Centenary Scholarship, Malaysian Society of Parasitology and Tropical Medicine Life Membership, Malaysian Society of Parasitology and Tropical Medicine Medal for being an outstanding young scientist, the University of Malaya Excellence Award for outstanding achievement in the category of Excellent Lecturer (for Sciences) and the Top Research Scientists Malaysia (TRSM) Award. In 2018, she was featured as one of the 10 Science Stars of East Asia in *Nature*.

# ACADEMIC STAFF

## PROF DATIN DR. INDRA VYTHILINGAM


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- **Medical entomology**
- **Vectors for malaria, dengue, JE & filariasis**

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 was working at the Institute of Medical Reseach (IMR), Malaysia and 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 is the only one at 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 randomised control trial is underway to establish 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 P. Malaysia.
She has published more than 120 scientific papers in peer-reviewed international and local journals, ten book chapters and one book. From 2012 onwards, 6 PhD students and 2 MSc students have graduated under her supervision. Currently she is supervising 5 PhD students and 1 MSc students. 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 a 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 *An. 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. Currently she is the subject Editor for an international journal Parasites and Vectors - a tier 1 journal.

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## ASSOC. PROF. DR. ZURAINEE MOHAMED NOR


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- Plant extract
- Entomology
- Drinking water quality (*Giardiasis*, & *Cryptosporidiosis*)
- Humoral immunology

Associate Professor Dr. Zurainee Mohamed Nor has been with the Department of Parasitology, Faculty of Medicine since 1991. She joined the department as a tutor and then as a lecturer after she completed her PhD at the University of Strathclyde, Scotland, United Kingdom in 1995. Apart from teaching, researching and supervising students, she has been participating in many activities at the department, faculty and university levels. She was among the key persons responsible for the development of Para:SEAD Lab, the diagnostic laboratory for parasitic infection under University Malaya Medical Centre (UMMC). In relation to that, she was invited by Prof. Hue Smith to visit the Scottish Parasite Diagnostic Lab (SPDL) in order to study the running of an accredited diagnostic laboratory. She was also one of the Japanese Society for the Promotional of Science (JSPS) scholarship recipient that provided her the opportunity to visit Chiba University, Japan and worked under the supervision of Prof. Yano.

At the department level, she was appointed as Program Coordinator, Quality Manager (DQM), and Internal Auditor for many years. At the faculty level she was appointed as Academic Advisor for second year medical students and as Advisor to the Medical Society (MedSoc). She involved heavily in the New Intergrated Curriculum Program (NIC) as Phase 2 Coordinator, a committee member of Faculty Quality Management System Unit, as Faculty Internal Auditor and involved as co-researcher in a study conducted by the faculty entitled “The Migrant Workers and Diseases”. At the university level she served the university as Principal to several UM residential colleges (4th, 5th 6th and 8th RC). As the Principal of residential college, she was responsible for ensuring the welfare of students and shaping soft skills among students staying at those colleges. She was also appointed as the Head of SERU (UM Student Empowerment & Research Unit) and as University Internal Auditor. She is also one of the consultants appointed by the Vice Chancellor for the analysis of waterborne parasites involving samples from government and private agencies.

As a researcher, her study of interest includes filaria, *Toxoplama*, malaria, waterborne parasites and plant extract. She has supervised numbers of local and international undergraduate, Master and PhD students. As a lecturer she received invitations from other public and private universities like University Putra Malaysia (UPM), and MAHSA University to give lecture/practical classes and as External Examiner for DAP&E, Master and PhD candidates from Institute of Medical Research (IMR), Universiti Sains Malaysia (USM) and Universiti Sains Islam Malaysia (USIM). She is also invited as External Examiner for Second Professional Examination 2018/2019 by USIM.

As far as her involvement in scientific society she was a member of the Malaysian Society for Parasite and Tropical Medicine (MSPTM) and once held the Treasurer post. She is a member to the Malaysian Scientific Association (MSA) and was one of the council members for several terms and once held the Secretary post. She was heavily involved as the Chairperson for several yearly programs organized by MSA and state governments, designed for secondary school students in relation to Science & Technology.

As a Certified Auditor, she was frequently invited by private accreditation bodies to audit selected government hospitals and academic institutions.

# ACADEMIC STAFF

## ASSOC.PROF.DR. WAN YUSOFF WAN SULAIMAN


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- **Medical Parasitology**
- **Medical Entomology**
- **Forensic Entomology**

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.

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.

# ACADEMIC STAFF

## ASSOC. PROF. DR. TAN TIAN CHYE


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- **Molecular parasitology genotyping**
- **Phylogenetic**

Dr Tan Tian Chye obtained his PhD in Medical Parasitology from University of Malaya in 2005 and was appointed as a lecturer at the Department of Parasitology, Faculty of Medicine in the same year. He was later promoted to Associate Professor in 2016. His primary research focus has been aimed at elucidating the pathogenic role of *Blastocystis*, an intestinal parasite. Over the years, he has diversified his research into the PCR detection and *in vitro cultivation* of malaria, toxoplasmosis as well as waterborne pathogens. In 2011, he underwent training at University of Illinois (USA) under Professor Dr. Ramaswamy Kalyanasundaram on a NIH-funded project entitled DNA-vaccine development for lymphatic filariasis.

He is a prolific publisher of academic articles in peer-reviewed scientific, medical and veterinary 'high impact' journals. To date, he has produced more than 50 international ISI journal articles in the field of parasitology and microbiology. His article entitled "Predominance of amoeboid forms of *Blastocystis* in isolates from symptomatic patients" was awarded the Best International Paper in 2006 by the *Blastocystis* Research Foundation based in the United State of America. It was a landmark paper revealing the role of the amoeboid form of *Blastocystis* in causing disease in human and it was frequently cited by peers. He has co-authored a chapter entitled "Romancing *Blastocystis* : A 20-year affair" in Parasites and their vectors: A special focus on Southeast Asia, published by a prestigious international journal.

He had six research grants which he leaded as principal investigator and 5 more as co-investigator. The total amount of the grants acquired was RM660,000. He has established international linkages particularly with researchers in Thailand and the Phillipines on the waterborne pathogens.

Over the years, he has contributed significantly in teaching activities and the development and delivery of curriculum in the various administrative roles that he has held. He has been actively involved in teaching students in the courses of Bachelor of Medicine and Surgery (MBBS), Bachelor of Biomedical Sciences, Pharmacy, Nursing and Diploma in Medical Laboratory Technologist. He was the Faculty Coordinator for MBBS programme for 3 years from 2013 to 2016. He chaired the faculty vetting committee and was the key person to ensure the smooth running of the course as well as the examination for the Phase II MBBS students. He was student-oriented and had regularly met up the MBBS students. He has been appointed as the Imaging Services Manager (Electron Microscopy) in the Central Unit for Advanced Research Imaging (CENTUARI), Faculty of Medicine since 2016 till date.

He is also active in participating in professional body. He is a life member of the Malaysian Society of Parasitology and Tropical Medicine (MSPTM). He has served as a council member of the MSPTM for five terms and was the Hononary Treasurer for two terms. In honour for his contribution to the Society, he was awarded the MSPTM Medal in 2012.

# ACADEMIC STAFF

## DR. AMIRAH AMIR


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- **Malaria**
- **Non-human primate malaria**
- ***Anopheles* colonization**
- **Medical parasitology**

Dr. Amirah Amir obtained her MBBS from University of Malaya in 2008. After completing her compulsory service under Ministry of Health, she pursued her PhD in Parasitology and currently holds the post of Medical Lecturer in Faculty of Medicine, University of Malaya.

She has published 28 research papers in peer-reviewed journals with H-index of 7 and a total of 121 citations. Her topic of interest is malaria, zoonotic malaria and medical parasitology. She has also contributed several book chapters on Problem Based Learning and has published a textbook with Springer titled 'Medical Parasitology – A Textbook'.

Dr. Amirah has been the recipient/co-recipient of several research grant including the UM Research Fund Assistance (BKP), Hubert Curien Partnership (PHC-Hibiscus) Grant, Fundamental Research Grant Scheme (FRGS), and Long Term Research Grant Scheme (LRGS).

Dr. Amirah is currently the coordinator of the Parasitology Diagnostic Unit in University Malaya Medical Centre where she provides consultation on medical parasitology. She also serves as the advisory committee chair and coordinator for the malaria screening program under Laboratory Quality Assurance Scheme (LABQAS).

Dr. Amirah is passionate about teaching and is the department's coordinator for Master of Pathology (MPath), University Malaya Medical Programme (UMMP) and is part of the faculty's Problem Based Learning (PBL) team.

Dr. Amirah is currently an Editor for the Journal of Health and Translational Medicine (JUMMEC) and Associate Editor for Asia Pacific Journal of Molecular Biology and Biotechnology (APJMBB). She is also the Honorary Treasurer for Malaysian Society for Molecular Biology and Biotechnology. She is a member of Malaysian Society of Parasitology and Tropical Medicine and life member of Malaysian Medical Association.

Dr. Amirah has been awarded the UM Excellent Service Award in 2018 and Certificate of Excellent Service twice – in 2017 and 2020. She also won the Bronze medal in Knovasi: Kongress & Pertandingan Inovasi Pengajaran & Pembelajaran, UKM, 2020 for her contribution in generating solutions for problem-based learning (PBL) beginners.

# ACADEMIC STAFF

## DR. NORAISHAH MYDIN ABDUL - AZIZ


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- **Molecular & structural biology**
- **Arthropods of medical importance**
- **Neural tube defect** ***(Developmental neurobiology)***

It has been 10 years since I published my first paper (Abdul-Aziz NM, Turmaine M, Greene ND, & Copp AJ. 2009. EphrinA-EphA receptor interactions in mouse spinal neurulation: implications for neural fold fusion. Int J Dev Biol, 53(4), 559-68) and 11 years since I first joined the ever-joyful Department of Parasitology which has been my home away from home. Due to my interesting personality and curriculum vitae among others, I have come to the humble realisation that happiness exists in great bounty when pleasure is derived from nurturing young minds in the ever-challenging premise known as life. I am humbled by students continuously requesting positions in my laboratory despite the current tenuous scenario in procuring research grants. I am humbled too by the patient group which I support known as MALAYSIA NTD. Neural tube defects (NTDs) is a devastating condition and is in fact the leading central nervous system malformation in humans with an occurrence of 1-10 in 1000 births worldwide (Mohd-Zin S W, Marwan AI, Abou Chaar MK, Ahmad-Annuar A, & Abdul-Aziz NM. 2017. Spina Bifida: Pathogenesis, Mechanisms, and Genes in Mice and Humans. Scientifica (Cairo), 2017, 5364827). I should know as I have it. I have suffered the consequences of spina bifida occulta with neurological deficits since birth with an L3 lesion.

I am perhaps the oldest surviving person in Malaysia with spina bifida and a permanent ileal conduit which I have had since the age of 3. I understand the difficulties and anxieties of this condition so very acutely which is how I have built a network between individuals with spina bifida, their families, their care-givers and have tried to a certain extent to get government bodies in Malaysia to be vested in the interests of individuals with spina bifida which I hope to continue pursuing comfortable ensconced in the great working environment which is Department of Parasitology, FOM.

The peaceful environment of the Department of Parasitology has enabled me to build a mouse model with spina bifida occulta which may be the answer to the understanding of the mechanism between the aperta-type and the occulta-type as this is the first model of occulta with neurological deficits targeting 2 very specific genes whereby the surface ectoderm or the presumptive skin seems to be integral in the understanding of neural tube defects. A novel occulta-type spina bifida mediated by murine double heterozygotes EphA2 and EphA4 receptor tyrosine kinases. I am also now embarking on a series of proposed experiments to study the effects of parasites such as Blastocystis hominis, Toxoplasma gondii and Giardia lamblia on the developing mouse embryo. This is timely considering the recent outbreak of microorganisms potentially causing birth defects It has been an interesting journey thus far!

**HIDUP JABATAN PARASITOLOGI !**

# ACADEMIC STAFF

## DR. ROMANO NGUI


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- **Geographical information system (Spatio-Temporal Analysis)**
- **Molecular epidemiology & public health**
- **Medical parasitology**

Dr. Romano Ngui obtained his degree in Bachelor of Biomedical Science (2008), Master of Medical Science (2010) and Doctor of Philosophy (PhD) (2013) from the University of Malaya. His PhD thesis has been awarded distinction by the University of Malaya. Currently, he is a Senior Lecturer at the Department of Parasitology, Faculty of Medicine, University of Malaya.

To date, he has published over 60 journals (ISI Cited Publication) and 2 book chapters. According to the latest Thomson Reuters record, he has 13 h-index. Likewise, he has 17 h-index with 1012 citations based on the Google Scholars Citation record. Currently, he supervised 4 PhD and 2 Master candidates with 2 already completed. He is also actively supervising undergraduate final year research project including international internship students. His research interest is the epidemiological distribution of infectious diseases particularly Parasitology and Tropical Medicine that to developed and applied molecular and statistical models/tools to support operational research activities relating to infectious diseases control.

He has won several awards including University of Malaya Excellent Award under the category 'PhD Candidates with Highest Impact Publication' and 'PhD Candidates Completed Less Than 3 Years' (2013), 'Gold Medal Award' and 'Most Powerful Innovation Award' in the BioMalaysia Research Exhibition, Ministry of Science, Technology, and Innovation (MOSTI) and Malaysian Biotechnology Cooperation (2013) and the University of Malaya Excellent Service Award (Anugerah Perkhidmatan Cemerlang, APC) (2017).

He has attended intensive research training at the London School of Hygiene and Tropical Medicine (LSHTM), United Kingdom in the field of Spatial Epidemiology in Public Health (2011).

He has also been successfully selected to attend several international workshops including Introduction to Modeling of Infectious Diseases Workshop organized by Hong Kong University-Pasteur Research Pole (2016), Ungku Omar-Newton Fund Epidemiological Modeling Workshop organized by the University of Malaya and Imperial College London (2017) and Southeast Asian Scholars for Higher Education Leadership (SEASHEL) (2018) organized by the Ministry of Higher Education, Malaysia.

Apart from his academic position, he is also actively involved in various co-curriculum student activities includes sport, community and volunteerism work through his roles as a Fellow of the First Residential College, University of Malaya. Some of these activities have gained media coverage in major newspapers and mass media stream including RTM 1, Berita Harian, Harian Metro, Sinar Harian, and Utusan Borneo. He is also an active member of the Malaysian Society of Parasitology and Tropical Medicine (MSPTM) since 2008. He has served as Assistant Honorary Secretary and Council Member to the society).

# ACADEMIC STAFF

## DR. CHEONG FEI WEN


03-7967 6618

fwcheong18@um.edu.my


- Molecular cloning
- Malaria
- Protein expression
- Epitope mapping

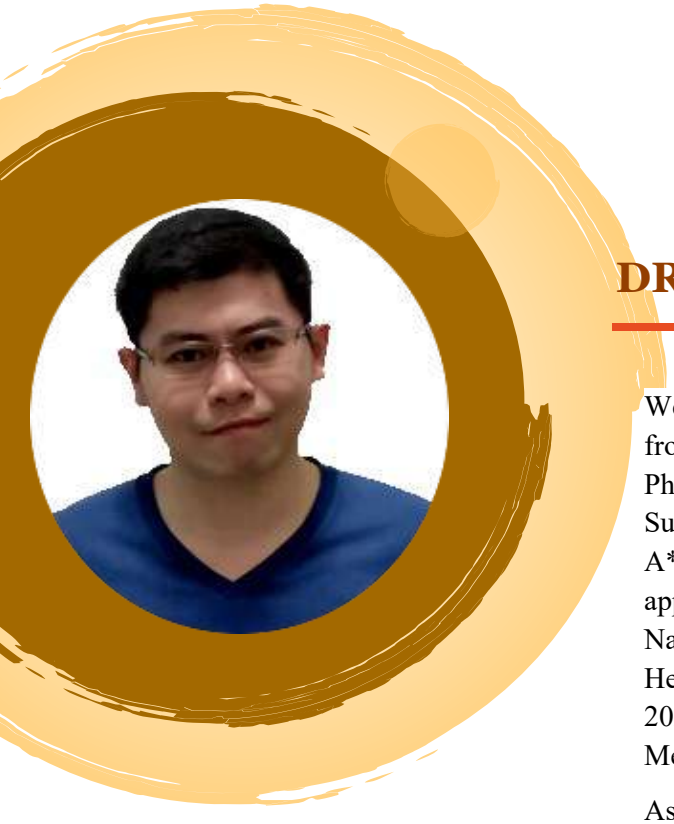
Cheong Fei Wen obtained her Bachelor Degree in Biomedical Science (with distinction) from University of Malaya (UM), Malaysia in 2009. She passed her PhD with distinction early 2015 and received her PhD scroll in UM convocation 2015. She is currently holding the post of senior lecturer in Department 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) in 2017 and Wellcome Genome Campus Advanced Course: Malaria Experimental Genetics (WGCAC, UK) in 2018. She has also obtained and be part of several research grants, including UM Research Fund Assistance (BKP), Postgraduate Research Fund (PPP), Frontier Research Grant (FRG), Fundamental Research Grant Scheme (FRGS), and Long-Term Research Grant Scheme (LRGS). With that, she has published about 20 research articles in ISI-indexed journals.

She is currently the 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 has received certificate of excellent service, UM in 2019. She is currently the department Course Coordinator for courses Diagnostic Parasitology and Advanced Diagnostic Parasitology in Bachelor's Degree of Biomedical Science Programme, committee member of Programme Quality Assurance - Quality Committee Faculty of Medicine (FOM), committee member of Seminar Proposal Defence for Postgraduates FOM, committee member for Jawatankuasa Kurikulum di Peringkat Jabatan (JKKJ) and Jawatankuasa Pengajian (JKP) for the department new master programme, Master of Medical Parasitology and Entomology Programme. She has been appointed as Programme Coordinator for Master of Medical Parasitology and Entomology and Programme Quality Assurance Expert (ProQAE) FOM in year 2021.

# ACADEMIC STAFF



## DR. WENN-CHYAU LEE


03-7967 4743

wclee@um.edu.my


- **Malaria immuno-pathobiology**

Wenn-Chyau Lee received his BSc (Hons) degree in Biomedical Sciences from University of Malaya, Malaysia in year 2011, and graduated with his PhD in Medical Sciences from University of Malaya in year 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 OF-YIRG grant awarded by the National Medical Research Council (NMRC) of Singapore in year 2018. He joined the newly formed A*STAR ID Labs as an investigator in year 2021. Subsequently, he joined the Department of Parasitology, Faculty of Medicine, University of Malaya as a senior lecturer.

As a parasitologist, he has involved in studies encompassing a number of medically important parasites such as the malaria causative agent *Plasmodium* spp., *Toxoplasma gondii* that causes toxoplasmosis, *Brugia pahangi* that can cause zoonotic filariasis, as well as disease vectors like mosquitoes of medical importance. 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. He has been working 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. To date, he has published in a number of reputable journals such as Blood, eLife, EBioMedicine, Frontiers in Immunology, and Frontiers in Microbiology, and has become reviewers for journals such as Scientific Reports, Tropical Biomedicine, PLoS Neglected Tropical Diseases, Acta Tropica, Bio-protocols, and Journal of Blood Medicine.

# ACADEMIC STAFF

## DR. WAHIB MOHAMMED MOHSEN ATROOSH


03-7967 3789

wahib@um.edu.my


- **Malaria epidemiology & genotyping**
- **Plasmodium falciparum**
- **Antimalarial drug resistance**

Wahib M. Atroosh, from Yemen, has joined the Department of Parasitology, UM as an academic lecturer in 2019. He has started his postgraduate journey as a Master student in the Department of Parasitology, UM in December 2009, continued the PhD in 2012 and later has awarded the PhD with Distinction in 2017. The scientific career of Dr Wahib has been dedicated to the falciparum malaria parasite, the most malignant cause of human malaria, top-ranked the mortality rate and led the parasite resistance to antimalarial drugs. The research work of Dr Wahib has focused on the monitoring of antimalarial drugs resistance using *in vivo* clinical trials and molecular gene markers. He joined an external research collaboration with the Medical Research Center, Jazan University, Saudi Arabia and a local one with the School Biological Sciences, Universiti Sains Malaysia (USM) on the epidemiology, genotyping and molecular evaluation of antimalarial drugs resistance of falciparum malaria isolates from the Kingdom of Saudi Arabia and Nigeria, respectively. In addition to malaria research, Dr Wahib has contributed to other research projects including intestinal protozoa, schistosomiasis, soil-transmitted helminths (STH) and health education programs for parasitic infections. More recently, Dr Wahib has contributed to designing a new gene marker of discrimination of falciparum malaria isolates, suitable for correcting in *vivo* malaria clinical trials. Over the years of being a researcher at the Department of Parasitology, Dr Wahib has published 26 papers in ISI-indexed journals with an h-index of 13 and a total of 799 citations. Furthermore, he is a reviewer in reputable journals such as PLoS ONE, PLoS Neglected Tropical Diseases, Parasites & Vectors, Malaria Journal, Transaction of the Royal Society of Tropical Medicine and Hygiene, BMC Medicine, Pathogens and Global Health, International Research Journal of Public and Environmental Health and Tropical Biomedicine.

# SUPPORT STAFFS

**Mazni Mohamed Ali**
Administrative Assistant

**Awang Bhukhari Bin Matsat**
Administrative Assistant


**Dzuzaini Mohd Ghazali**
Research Officer

**Mohd Khairul Bin Roslan**
Medical Laboratory Technologist

**Sharifah Nor Akmar Syed Mohd**
Medical Laboratory Technologist

**Mohd Redzuan Ahmad Naziri**
Medical Laboratory Technologist

**Mohd Sazalle Jamil**
Pembantu Am Pejabat

**Rohani Ali**
Pembantu Am Pejabat

# POST-DOCTORAL RESEARCH FELLOWS

**Dr. Jonathan Liew Wee Kent**
**Molecular epidemiology & malaria vectors**
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**Dr. Lai Meng Yee**
**Malaria (*Plasmodium knowlesi*)**
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**Dr. Arutchelvan Rajamanikam**
**Gut microbiome; *Blastocystis* & host-pathogen interaction; pathobiome**
arun04@um.edu.my

**Dr. Tan Tiong Kai (Stanley)**
**Nematology (drug resistance); Medico-veterinary parasitology & entomology**
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**Dr. Yap Nan Jiun**
**Molecular epidemiology & characterization of parasites**
nanjiunyap@um.edu.my

## PhD STUDENTS

| | | |
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| 1 | MVA190022 | Aimi Diyana Gapor |
| 2 | 17169664 | Er Yi Xian |
| 3 | 17218454 | Freddy Franklin A/L Anthony Joseph |
| 4 | 17202081/2 | Lee Phone Youth @ Zen Lee |
| 5 | MHA160019 | Manal Ali Saleh Al-Ashwal |
| 6 | MVA190004 | Nantha Kumar A/L Jeyaprakasam |
| 7 | MVA180045 | Naqib Rafieqin B. Noordin |
| 8 | 17217909 | Ng Yee Ling |
| 9 | MVA170003 | Pavitra A/P Soosai |
| 10 | 17219440 | Phang Wei Kit |
| 11 | MVA190005 | Sandthya Pramasivan |
| 12 | MVA180036 | Sivaneswari A/P Selvarajoo |
| 13 | MVA190025 | Siti Waheeda Binti Mohd Zin @ Zain |
| 14 | MVA190020 | Tan Jia Hui |
| 15 | MVA180032 | Tan Pei Yee |
| 16 | MGN180028 | Tan Wing |
| 17 | 17218684 | Ummi Wahidah Binti Azlan |
| 18 | MHA150047 | Vinnie Siow Wei Yin |
| 19 | MHA150016 | Wan Najdah Binti Wan Mohamad Ali |

## MASTER STUDENTS

| | | |
|---|---|---|
| 1 | MGN170011 | Ahmad Fakhriy Hassan |
| 2 | S20209043/1 | Nisheljeet Singh A/L jogineder Singh |
| 3 | MGN160037 | Rafidah Ali |
| 4 | 17062142 | Siti Farah Norasyikeen Bt Sidi Omar |
| 5 | MGN180029 | Syahirah Nadiah Binti Mohd Johari |
| 6 | MMF190020 | Ummi Kalthum Bt Azlan |

# RESEARCH GRANTS

| | |
|---|---|
| **Prof. Dr. Lau Yee Ling** | • Program Berimpak Tinggi 6 (HIP6), Principal Investigator(PI), 2020 - 2021, Geran Khas Dana Harta Intelek (COPYRIGHT) |
| | • Point-of-Care (PoC) Reverse Transcription Loop-Mediated Isothermal Amplification Assay for rapid detection of SARS-CoV-2, Principal Investigator(PI), 2020 - 2021, Prototype Research Grant Scheme (PRGS) |
| | • Rapid Point-of-Care (PoC) tests for the detection of malaria, Principal Investigator(PI), 2019 - 2023, Long Term Research Grant Scheme (LRGS) |
| **Prof. Dr. Suresh Kumar** | • Development of a predictive tool for the predisposition of colorectal cancer (CRC) using gut microbiome analysis and mucosal immunity with reference to *Blastocystis* sp. (TRGS - Programme) |
| | • Elucidating the interaction between *Blastocystis* sp. and microbial diversity to study its effect on healthy individuals and patients with different stages of colorectal cancer. (TRGS - Project) |
| | • Assessment of gut microbiota including *Blastocystis* sp. In the early detection of mental illness |
| **Prof. Datin Dr. Indra Vythilingam** | • Geographical distribution and bionomics of the vectors of *Plasmodium knowlesi* malaria with reference to malaria elimination in P. Malaysia, Principal Investigator(PI), 2019 - 2022, Long Term Research Grant Scheme (LRGS) |
| | • Endogenous viral elements in Malaysian Aedes mosquitoes with natural resistance against chikungunya virus, Consultant, 2018 - 2021, RU GERAN - Fakulti Program |
| **Prof. Dr. Fong Mun Yik** | • Characterising the zoonotic potential of *Plasmodium cynomolgi*, a malaria parasite prevalent in macaques in Malaysia and Southeast Asia, Principal Investigator(PI), 2020-2023, Fundamental Research Grant Scheme (FRGS) |
| | • Genetic diversity of *Plasmodium knowlesi* invasion-related proteins, (Project Leader), 2019 - 2023, Long Term Research Grant Scheme (LRGS) |
| | • A Multi-pronged approach in combating Knowlesi Malaria, (Program Leader), 2019 - 2023, Long Term Research Grant Scheme (LRGS) |
| | • Effect of erythrocyte Duffy (fy) polymorphism on human susceptibility to the zoonotic malaria parasite *Plasmodium knowlesi*, Principal Investigator(PI), 2017 - 2020, UM Grant - Frontier Research Grant |

| | |
|---|---|
| **Prof. Dr. Yvonne Lim Ai Lian** | • The microbiome diversity of the Malaysian long house of Borneo, Principal Investigator(PI), 2019 - 2020, University of Malaya Partnership Grant |
| | • Interactions between helminth colonization and the gut microbiota, Principal Investigator(PI), 2018 - 2022, International Funding. |
| **A/P Dr. Wan Yusoff Wan Sulaiman** | • Genetic approaches to reducing vector competence of *Aedes Aegypti* for Chikungunya Virus, Consultant, 2016 - 2022, International Funding |
| **Dr. Noraishah Mydin Abdul-Aziz** | • Identification of candidate gene variants and its relevance in the understanding of Spina Bifida in Malaysia, Principal Investigator(PI), 2019 - 2022, Fundamental Research Grant Scheme (FRGS) |
| **Dr. Romano Ngui** | • Molecular characterization and associated clinical manifestation of opportunistic pathogenic organisms among immunocompromised children with cancer, Principal Investigator(PI), 2019 - 2021, Others MOHE - Top 100 (IIRG)-HWB |
| | • Development and evaluation of rapid and simultaneous detection of Neglected Helminths species using Pentaplex Conventional Polymerase Chain Reaction (PCR) Assay, Principal Investigator(PI), 2018 - 2021, Private Funding |
| | • Population based-cross-sectional study of parasitic infection among Orang Ulu communities in Sarawak, Principal Investigator (PI), 2017 - 2020, Geran Penyelidikan Universiti Malaya (UMRG Programme) - HTM (Wellness) |
| **Dr. Amirah Amir** | • Zoogeographical distribution, epidemiology, and multilocus genotyping of *Plasmodium Knowlesi* among primates in Peninsular Malaysia, Principal Investigator(PI), 2019 - 2023, Long Term Research Grant Scheme (LRGS) |
| **Dr. Cheong Fei Wen** | • Would genetic polymorphism in *Plasmodium Knowlesi* Duffy binding protein alpha (PkDBPalpha) lead to differences in regulation of immune responses in host?, Principal Investigator(PI), 2019 - 2021, Fundamental Research Grant Scheme (FRGS) |


**2nd RUNNER UP**
Highest ISI-Indexed Publication 2021 (Non-Clinical)
Faculty of Medicine
Universiti Malaya

# PUBLICATIONS

**(Ratio of Published Papers/Academic Staff = 3.6)**

| | | |
|---|---|---|
| 1 | Spatial distribution of *Plasmodium knowlesi* cases and their vectors in Johor, Malaysia: in light of human malaria elimination | MALARIA JOURNAL |
| 2 | A Case of Zoonotic *Ancylostoma ceylanicum* Infection in a Suburban Area of Selangor, Malaysia | ACTA PARASITOLOGICA |
| 3 | The return of chloroquine-sensitive *Plasmodium falciparum* parasites in Jazan region, southwestern Saudi Arabia over a decade after the adoption of artemisinin-based combination therapy: analysis of genetic mutations in the pfcrt gene | PARASITOLOGY RESEARCH |
| 4 | High incidence of *Plasmodium knowlesi* malaria compared to other human malaria species in several hospitals in Malaysia | TROPICAL BIOMEDICINE |
| 5 | Bioinformatics characterization of *Plasmodium knowlesi* apical membrane antigen 1 (PkAMA1) for multi-epitope vaccine design | TROPICAL BIOMEDICINE |
| 6 | Oral bacteria detection among children with cancer in a tertiary teaching hospital in Kuala Lumpur, Malaysia | TROPICAL BIOMEDICINE |
| 7 | Epidemiological study of human intestinal parasites in Sarawak, East Malaysia: A review | TROPICAL BIOMEDICINE |
| 8 | Residual malaria in Jazan region, southwestern Saudi Arabia: the situation, challenges and climatic drivers of autochthonous malaria | MALARIA JOURNAL |
| 9 | Diversity and natural selection of Merozoite surface Protein-1 in three species of human malaria parasites: Contribution from South-East Asian isolates | MOLECULAR AND BIOCHEMICAL PARASITOLOGY |
| 10 | Experimental Study on *Plasmodium knowlesi* Normocyte Binding Protein Xa Region II (PkNBPXaII) for Erythrocyte Binding | TROPICAL BIOMEDICINE |
| 11 | Genetic diversity of the full length apical membrane antigen-1 of *Plasmodium knowlesi* clinical isolates from Peninsular Malaysia | TROPICAL BIOMEDICINE |
| 12 | Evaluation of Mosquito Magnet and other collection tools for *Anopheles* mosquito vectors of simian malaria | PARASITES & VECTORS |
| 13 | Improved Aedes /dengue field surveillance using Gravid Oviposition Sticky trap and dengue NS1 tests: Epidemiological, entomological outcomes and community acceptance | ACTA TROPICA |
| 14 | Validation of SYBR green I based closed-tube loop-mediated isothermal amplification (LAMP) assay for diagnosis of knowlesi malaria | MALARIA JOURNAL |
| 15 | Expression of *Ascaris lumbricoides* putative virulence-associated genes when infecting a human host | PARASITES & VECTORS |
| 16 | Complications of Sub-microscopic *Plasmodium vivax* Malaria among Orang Asli in Pos Lenjang, Kuala Lipis | TROPICAL BIOMEDICINE |
| 17 | Enteral myiasis causing acute dysentery: A case report | TROPICAL BIOMEDICINE |
| 18 | Serological survey of canine vector-borne diseases in two animal shelters in central Peninsular Malaysia | TROPICAL BIOMEDICINE |
| 19 | Copro-molecular identification of intestinal nematode infections in a rural community in East Malaysia | PARASITOLOGY INTERNATIONAL |
| 20 | Prevalence of simian malaria parasites in macaques of Singapore | PLOS NTD |
| 21 | Erythrocyte Binding Activity of PkDBP alpha II of *Plasmodium knowlesi* Isolated from High and Low Parasitemia Cases | AMERICAN JOURNAL OF TROPICAL MEDICINE AND HYGIENE |
| 22 | Prevalence of anti-Leptospira antibodies and associated risk factors in the Malaysian refugee communities | BMC INFECTIOUS DISEASES |
| 23 | Natural Human Infections with *Plasmodium cynomolgi*, *P. inui*, and 4 other Simian Malaria Parasites, Malaysia | EMERGING INFECTIOUS DISEASES |
| 24 | Environmental and spatial risk factors for the larval habitats of *Plasmodium knowlesi* vectors in Sabah, Malaysian Borneo | SCIENTIFIC REPORTS |

| | | |
|---|---|---|
| 25 | Comparison of apoptotic responses in *Blastocystis* sp. upon treatment with Tongkat Ali and Metronidazole | SCIENTIFIC REPORTS |
| 26 | Feature Extension of Gut Microbiome Data for Deep Neural Network-Based Colorectal Cancer Classification | IEEE Access |
| 27 | Nutritional status, hemoglobin level and their associations with soil-transmitted helminth infections between Negritos (indigenous) from the inland jungle village and resettlement at town peripheries | PLOS ONE |
| 28 | Spatio-temporal spread of chikungunya virus in Sarawak, Malaysia | TRANSACTIONS OF THE ROYAL SOCIETY OF TROPICAL MEDICINE AND HYGIENE |
| 29 | Bioefficacy of mosquito mat vaporizers and associated metabolic detoxication mechanisms in *Aedes aegypti* (Linnaeus) in Selangor, Malaysia: A statewide assessment | TROPICAL BIOMEDICINE |
| 30 | Spatial distribution of mosquito vector in dengue outbreak areas in Kuala Lumpur and Selangor, Malaysia | JURNAL SERANGGA |
| 31 | Psychological stresses in children trigger cytokine- and kynurenine metabolite-mediated abdominal pain and proinflammatory changes | FRONTIERS IN IMMUNOLOGY |
| 32 | Nickel(II) complexes with polyhydroxybenzaldehyde and O,N,S tridentate thiosemicarbazone ligands: Synthesis, cytotoxicity, antimalarial activity, and molecular docking studies | JOURNAL OF MOLECULAR STRUCTURE |
| 33 | Spatial and temporal patterns of *Plasmodium knowlesi* malaria in Sarawak from 2008 to 2017 | AMERICAN JOURNAL OF TROPICAL MEDICINE AND HYGIENE |
| 34 | Characterization of cytoadherence properties of *Plasmodium knowlesi*-infected erythrocytes | FRONTIERS IN MICROBIOLOGY |
| 35 | Metabolite profiling of endophytic *Streptomyces* spp. and its anti-plasmodial potential | PEERJ |
| 36 | Correction: Development of a reverse transcription recombinase polymerase amplification assay for rapid and direct visual detection of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) | PLOS ONE |
| 37 | Colorimetric reverse transcriptional loop mediated isothermal amplification (RT-LAMP) assay for rapid detection of SARS-CoV-2 | AMERICAN JOURNAL OF TROPICAL MEDICINE & HYGIENE |
| 38 | Microencapsulation Preservation of the Stability and Efficacy of Citrus Grandis Oil-Based Repellent Formulation against Aedes aegypti during Storage | MOLECULES |
| 39 | Natural *Plasmodium inui* Infections in Humans and *Anopheles cracens* Mosquito, Malaysia | EMERGING INFECTIOUS DISEASES |
| 40 | A Linkage-Based Genome Assembly for the Mosquito *Aedes albopictus* and Identification of Chromosomal Regions Affecting Diapause | IINSECTS |
| 41 | The vectors of Plasmodium knowlesi and other simian malarias Southeast Asia: challenges in malaria elimination | ADVANCES IN PARASITOLOGY |
| 42 | Surveillance of *Aedes aegypti* and *Aedes albopictus* (Diptera: Culicidae) in high-rise apartment buildings in Selangor, Malaysia | INTERNATIONAL JOURNAL OF TROPICAL INSECT SCIENCE |
| 43 | Spatial dispersal of *Aedes albopictus* captured by Modified Sticky Ovitrap in Selangor, Malaysia | GEOSPATIAL HEALTH |
| 44 | Spatially Varying Relationships between Climate Factors and Human Leptospirosis in Sarawak, Malaysia | TROPICAL BIOMEDICINE |
| 45 | Asymptomatic neurotoxicity of amyloid beta-peptides (A beta(1-42) and A beta(25-35)) on mouse embryonic stem cell-derived neural cells | BOSNIAN JOURNAL OF BASIC MEDICAL SCIENCES |
| 46 | High incidence of *Plasmodium knowlesi* malaria compared to other human malaria species in several hospitals in Malaysia | TROPICAL BIOMEDICINE |
| 47 | *Plasmodium falciparum* rosetting protects schizonts against artemisinin | EBioMEDICINE |

# Seminars

## PROPOSAL SEMINARS

| SER. | NAME/MATRIC NO. | TITLE |
|---|---|---|
| 1 | Freddy Franklin A/L Anthony Joseph (17218454) | Studies to Establish The Association Between Microbial Infections, Gut Microbiome and Immunity in Individuals With Mental Illness Such as Schizophrenia and Depression |
| 2 | Shahhaziq Shahari (17219544) | The Prevalence of Simian Malaria in Peninsular Malaysia Macaques and the Establishment of a Plasmodium knowlesi in vitro culture infectious to Anopheles cracens mosquitoes |
| 3 | Wan Siti Maryam binti Wan Nazri (17138657/3) | Evaluation of antigen-specific polyclonal antibodies using sandwich enzyme-linked immunoassay (ELISA) method for Plasmodium knowlesi detection |
| 4 | Nisheljeet Singh A/L Joginder Singh (S2029043/1) | Investigating Scientific Understanding And Advocacy Amongst Malaysian Spina Bifida Families Encompassing Diet And Antibiotic Stewardship |
| 5 | Er Yi Xian (17169664/2) | Epidemiology of common skin infections (scabies and tinea) among the Orang Asli in Peninsular Malaysia and their associations with skin microbiota and host genetics |

# Seminars

## CANDIDATURE SEMINARS

| SER. | NAME/MATRIC NO. | TITLE |
|---|---|---|
| 1 | Ummi Kalthum binti Azlan (MMF190020) | The Effect of Plasmodium knowlesi Duffy Binding Protein Alpha Region II (PkDBPαII) Genetic Polymorphisms on The Immune Responses In Animal Models. |
| 2 | Wan Nadjah Wan Mohamad Ali (17032725) | DENV-infected Aedes mosquito from dengue hotspot areas in Kuala Lumpur and Selangor, Malaysia: Maps of their distribution, resistance status and enzymatic activities. |
| 3 | Sivaneswari A/P Selvarajoo (1799232/1) | Gravid Ovipositing trap(GOS) and NS1 Antigen Test Kit for Early Dengue Vector Surveillance in Selangor, Malaysia: A Randomised Control Trial Research Area: Vector Control |
| 4 | Siti Farah Norasyikeen binti Sidi Omar (17062142/3) | Study of Gastrointestinal Parasite and Gut Microbiota among Cancer Patients in a Tertiary Teaching Hospital in Malaysia. |
| 5 | Vinnie Siow Wei Yin (17013354/1) | Epidemiology of Filarial Parasites In Canine, Clinical Observations and Their Association with Mosquito Vectors |

# Seminars

## CONFIRMATION SEMINARS

| SER. | NAME/MATRIC NO. | TITLE |
|---|---|---|
| 1 | Naqib Rafieqin Noordin (17198072/1) | Genetic and Phenotypic Characterisation of Plasmodium knowlesi Merozoite Surface Protein-1 (PkMSP-1) respective to Peninsular Malaysia and Malaysian Borneo |
| 2 | Tan Jia Hui (17068070/2) | Development and Optimization of Immunochromatographic Test (ICT) for Rapid Diagnosis of Human Malaria and Its Field Evaluation |
| 3 | Sandthya Pramasivan (17202544) | Genetic variation and spatial distribution of simian malaria vectors of Peninsular Malaysia |
| 4 | Ummi Wahidah binti Azlan (17218684) | Genetic diversity and immunogenicity profiling of Plasmodium knowlesi surface protein altered thrombospondin repeated domain (PkSPATR) and rhoptry |
| 5 | Phang Wei Kit (17219440/1) | Genetic diversity of Plasmodium knowlesi and modelling of its transmission in Peninsular Malaysia |

# Seminars

## THESIS SEMINARS

| SER. | NAME/MATRIC NO. | TITLE |
|---|---|---|
| 1 | Muhammad Aidil Bin Roslan (17048688) | Detection Of Dengue Virus And Wolbachia Infection In Aedes Aegypti And Aedes Albopictus Captured By Modified Sticky Ovitrap (MSO) |
| 2 | Wan Najdah Wan Mohamad Ali (17032725) | Insecticide resistance status and enzymatic activity of Aedes aegypti and Aedes albopictus from dengue hotspot areas in Kuala Lumpur and Selangor, Malaysia: Maps of their distribution. |
| 3 | Sivaneswari Selvarajoo (17199232/1) | Gravid Ovipositing Sticky Trap And Dengue NS1 Antigen Test Kit For Early Dengue Surveillance In Selangor, Malaysia: A Randomised Control Trial |

## CONVERSION SEMINAR

| SER. | NAME/MATRIC NO. | TITLE |
|---|---|---|
| 1 | Ng Yee Ling (17217909) | Genetic diversity and immunogeneticity profiling of Plasmodium knowlesi apical membrane antigen 1 (PkAMA-1) and Plasmodium knowlesi thrombospondin-related apical merozoite protein (PkTRAMP) from Peninsular Malaysia and Malaysian Borneo |


Muhammad Aidil Bin Roslan
MHA150008
PhD

Sonal Girish
MHA150029
PhD

Nabil Ahmed Mohammed Nasr
MHA130080
PhD


Fatma Diyana Bt Mohd Bukhari
MGN180037
Master

Ong Nyee Huey
MGN170026
Master

# REMARKABLE ACHIEVEMENT & AWARDS

## PROFESSOR DR. LAU YEE LING

**Gold Medal**

**The 3rd World Invention Olympiad Fair**

**Korea**

**26th April 2021**

## NANTHA KUMAR A/L JEYAPRAKASAM

**Winner**

**Malaysian Society of Parasitology and Tropical Medicine**

**Photography Competition**

**27th March 2021**

# Department Activities

## JOURNAL CLUB SEMINARS

| NO. | NAME | TITLE | DATE |
|---|---|---|---|
| 1. | ***PROF. MADYA DR. MOHD FIRDAUS MOHD RAIH***<br>*Universiti Kebangsaan Malaysia (UKM)* | STRUCTURAL BIOINFORMATICS: FINDING NEEDLES IN HAYSTACKS | 27.1.2021 |
| 2. | **MS LEONG WAI MUN**<br>*Bioinformatician, Neoscience Sdn Bhd* | ADVANCING YOUR RESEARCH WITH NEXT GENERATION SEQUENCING (NGS) & BIOINFORMATICS | 24.3.2021 |
| 3. | ***DR. NORAISHAH MYDIN ABD AZIZ***<br>*Invertebrate & Vertebrate Neurobiology Lab, Dept. Parasitology, Universiti Malaya* | *Latrodectus geometricus* ENVENOMATION IN MALAYSIA | 16.6.2021 |
| 4. | ***DR. NORAISHAH MYDIN ABD AZIZ***<br>*Invertebrate & Vertebrate Neurobiology Lab, Dept. Parasitology, Universiti Malaya* | INVERTEBRATE & VERTEBRATE NEUROBIOLOGY RESEARCH | 28.7.2021 |
| 5. | ***DR. NORAISHAH MYDIN ABD AZIZ***<br>*Invertebrate & Vertebrate Neurobiology Lab, Dept. Parasitology, Universiti Malaya* | VERTEBRATE & INVERTEBRATE NEUROBIOLOGY RESEARCH | 25.8.2021 |
| 6. | ***DR. AMIRAH AMIR***<br>*Department of Parasitology*<br>*Universiti Malaya* | WORMS, WORMS, WORMS: A SERIES CASE OF REPORTS | 8.9.2021 |
| 7. | ***DR. FELICITA FEDELIS JUSOF***<br>*Department of Physiology*<br>*Universiti Malaya* | CHRONIC INFLAMMATION: THE DIFFERENCE BETWEEN RECOVERY AND SEVERITY | 27.10.2021 |
| 8. | ***PROFESSOR DR. FONG MUN YIK***<br>*Department of Parasitology*<br>*Universiti Malaya* | CHARACTERISATION OF THE *Plasmodium Knowlesi* CIRCUMSPOROZOITE PROTEIN CENTRAL REPEAT REGION | 24.11.2021 |
| 9. | ***DR. FARAH AIDA BINTI DAHALAN***<br>*Imperial College London, UK* | A SINGLE CELL ATLAS OF *Plasmodium falciparum* TRANSMISSION THROUGH THE MOSQUITO | 22.12.2021 |

# SPECIAL Events

## Farewell

**Prof. Dr Suresh Kumar Govind**
**12th January 2021**


## 4th Intervarsity Parasitology Quiz & Oratorical Competition 2021

**15 University from Malaysia, Indonesia, Singapore, Thailand, the Philippines and USA**
**20th November 2021**


## 10th Animal Awareness Day Symposium

**scientific & academic speakers from Malaysia, Thailand and India as well as Malaysian animal care societies**
**16th December 2021**


## MOA signing ceremony between MSPTM and UM

**Donation of RM 100,000 to the Department of Parasitology, UM**
**To build a lecture hall for Master program of Parasitology & Entomology**
**(Dewan CP Ramachandran)**
**6th December 2021**





## Farewell

**Assoc. Prof. Dr Tan Tian Chye**
**22nd December 2021**

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

UNIVERSITI MALAYA

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Faculty of Medicine
Universiti Malaya
Tel: +60379674745
Email: mazni35@um.edu.my

Website:
medicine.um.edu.my/parasitology-department
www.facebook.com/parasiteum/
Application can be made through:
www.um.edu.my/how-to-apply-master

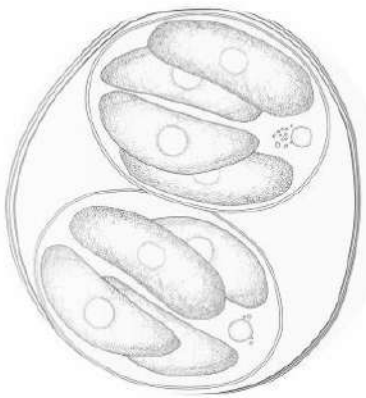
"The Department is one of the oldest and possibly the largest Parasitology Departments in the world. UM is currently ranked 9th in Asia and 59th in the QS world university ranking."

# Some of the subjects that will be covered:

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

## ACCEPTING APPLICATIONS FOR SEPTEMBER 2022 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.



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WWW.FACEBOOK.COM/PARASITEUM/
WWW.UM.EDU.MY/HOW-TO-APPLY-MASTER

# What did our students & alumni say?

The Department of Parasitology is a place where exploration, camaraderie, education and bustling activities happen. Where else can u understand biology of animals, humans, microorganisms and insects/spiders all at the same place?

**Dr. Jonathan Liew Wee Kent (Alumni)**

During the five years in Department of Parasitology doing a postgraduate research was one of the most memorable moments in my life. My supervisor, Prof Datin Dr Indra gave her best guiding in entomology and other skills.
Fun fact: I feed my own hands to mosquitoes till both hands are swollen.

**Dr. Wong Meng Li (Alumni)**

Years spent in this department have given me a broad range of academic and practical expertise. Throughout my master and PhD journeys, the entire team from head of the department and lecturers to the support staff members, was extremely helpful and supportive. The department is always like a second family to me. I'm so proud of being graduated from this department.

**Dr. Nabil Ahmed Mohammed Nasr (Alumni)**

Since the first time I set my foot in Department of Parasitology, I was greeted with a warm smile. Every single individual in the department, from the administration officers to the lectures have been very friendly from the get-go. My fellow colleagues from other laboratories have been extremely generous with their support and suggestions whenever I am facing problems with my experiments.

**Freddy Franklin (PhD Student)**

Being in this department has been a fun experience so far. From catching snakes, to breeding parasites to taking care of mosquitoes. It is a unique department with very supportive lecturers, staff and colleagues.

**Shahhaziq Shahari (PhD Student)**

The Parasitology department is the best department because it feels like we are a big happy family. From the lecturers to the staff and colleagues, everyone was very supportive, kind and friendly. Working with them has always brought me joy and it is an honor to be a part of this family.

**Eira Nurfarisha Binti Mohd Latif (Master Student)**

# EDITORIAL BOARD

*Thank You*

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Nantha Kumar A/L Jeyaprakasam
Sandthya A/P Pramasivan

**Acknowledgement:**

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