51ST ANNUAL SCIENTIFIC CONFERENCE OF THE MALAYSIAN SOCIETY OF PARASITOLOGY AND TROPICAL MEDICINE

TROPICAL DISEASES IN MALAYSIA: INNOVATIVE APPROACHES FOR EMERGING ISSUES

Officiated by
YBhg Dr Shahnaz Binti Murad
Deputy Director General of Health
(Research & Technical Support),
& Ministry of Health Malaysia.

3rd & 4th March 2015

Grand Seasons Hotel,
Kuala Lumpur

MESSAGE

Y. Bhg. Dr Shahnaz Murad
Deputy Director General of Health (Research and Technical Support),
Ministry of Health Malaysia

I am deeply honoured to be invited by the Malaysian Society of Parasitology and Tropical Medicine to pen down a message on the occasion of its 51st Annual Scientific Conference with the theme *"Tropical Diseases in Malaysia: Innovative Approaches for Emerging Issues"*.

Infectious diseases account for more than 17 million deaths worldwide each year, of which a substantial percentage affects communities in the tropics. Our Southeast Asian region, including Malaysia is a hotspot for tropical diseases, namely dengue, malaria, filariasis, Japanese encephalitis, chikungunya, leptospirosis and tuberculosis. These diseases constitute a major public health problem with an impact that is immense and felt across the world.

As the control and management of these diseases is an integral part of our country's health services, it is vital that there are multi-disciplinary efforts in which medical, veterinary and basic science expert co-ordinate their efforts towards finding common solutions. The rapid advancement in life science research and technologies affords us a great opportunity to utilize these technologies and harness their potential in developing successful strategies to fight diseases, through better surveillance, detection and diagnosis, in prevention or in treatment.

It is timely that this topic is deliberated at a national level as the country faces the unprecedented rise in dengue infections, the re-emergence of tropical diseases such as sarcocystosis and continued transmission of malaria, among other concerns. Let's create a new momentum tc address these issues and I encourage you to deliberate on innovative and effective mechanisms that can bring about better results and a greater impact. I am confident that this conference will provide us with new insights on how we can work together to harmonize national and regional efforts in combating tropical diseases.

I wish all of you a rewarding and successful conference.

DR SHAHNAZ MURAD

WELCOME ADDRESS BY PRESIDENT / CHAIRPERSON

Professor Dr. Yvonne Lim Ai Lian
President and Chairperson of the 51st Conference Organizing Committee
Malaysian Society of Parasitology and Tropical Medicine (MSPTM)

On behalf of the Malaysian Society of Parasitology and Tropical Medicine (MSPTM), I extend a warm welcome to all attending our 51st Annual Conference. The theme of this conference *"Tropical Diseases in Malaysia: Innovative Approaches for Emerging Issues"* aptly captures the vital need to have a paradigm shift in approaching tropical diseases that are emerging and re-emerging in our country, region and the world.

The challenges that we face with tropical diseases in recent times, be it malaria, dengue or ebola urges us to relook at the control and management strategies that we currently use. The ease of travel and global environmental changes cause spatial and temporal shifts to the distribution of species and diseases which result in new diseases or diseases not seen beyond its usual boundaries. In order to cope with these changes, we need to couple conventional technology with newer and more powerful tools, approaches that are innovative to tackle these emerging issues.

The organizing committee has planned an interesting scientific program with distinguished speakers from Malaysia and around the world to make this a truly exciting journey of knowledge and stimulating discussion. The highlights of the conference include the keynote address given by Dr Suresh Kumar, a senior national infectious disease consultant, to put into perspective the current status of tropical diseases in Malaysia. Prominent speakers from various agencies and universities have also been invited to update us on the emerging parasitic infections seen in local hospitals, and for the dengue forum and sarcocystosis symposium. This year, we are introducing a new format for the oral competition (3 minutes based on one slide) and it will be exciting to witness the presentations.

We are also much honored to have Dr Ronald Fayer, Prof Alan Cowman and Prof Jenefer Blackwell who will be delivering their plenary talks on sarcocystosis, malaria and visceral leishmaniasis, respectively. The response for papers has been overwhelming. A total of 9 invited, 57 oral/oral competitions and 52 poster papers will be presented during the 2-day conference.

We are grateful to Y. Bhg. Dr Shahnaz Murad, Deputy Director General of Health (Research and Technical Support), Ministry of Health Malaysia for her gracious presence and for officiating this conference. Thank you to all invited speakers, oral and poster presenters for your presence and participation. The Society is also appreciative to the various scientific companies that have joined hands with us in providing generous support and sponsorships in making this conference a success. To all MSPTM Council Members, Organizing Committee Members, colleagues and friends who have worked tirelessly for the smooth running of this conference, thank you very much.

I wish all of you a very productive intellectual discourse and a fruitful conference. Let no one leave the conference without making new contacts and creating strong bonds in our scientific network. Together, in MSPTM, we achieve more!

NADCHATRAM MEDAL RECIPIENT 2015

Associate Professor Dr. Lau Yee Ling

Dr Lau Yee Ling is at present an Associate Professor in the Department of Parasitology, Faculty of Medicine at University of Malaya (UM). She obtained her bachelor's degree in Biochemistry from UM in 1998, after which she pursued her Master's degree in Medical Science in 2001. At the same time, she was also a research assistant in the National University of Singapore (NUS) till the year 2004. She then continued her postgraduate studies in UM and obtained her PhD title in 2008.

She started her career as a junior lecturer at Monash University Sunway Campus while waiting for her PhD viva. During her time as a lecturer in Monash University, she was awarded two Monash University Research Grants in which she was able to continue her research in the field of parasitology. She then returned to her *alma mater* as a Senior Lecturer in 2009 and has continually garnered a number of grants.

Dr 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 immense health and economic burdens. Her interest in these pathogens does not only rest on their major impact on public health, but also due to the fact that they offer an ideal model for fundamental biological studies. The overall approach adopted during her research in this field was the application of molecular biological techniques to elucidate various aspects of the infection including the epidemiological, immunological, clinical and biological perspective. The importance of the genetic diversity that each parasite species displays has been a constant factor in her research. She has also devised tools and approaches that could be used as a basis for molecular epidemiological studies and diagnosis.

With her expertise in molecular parasitology and in molecular cloning and expression, she has collaborated with other local and international researchers, leading to numerous publications in refereed international and local journals. She has published 70 ISI journals (42 Tier-1); with total citations index of 265 and H-index of 9. Her work has also been presented at many scientific conferences locally and internationally. The academic excellence portrayed has enabled her to acquire and/or be a part of many research grants i.e. High Impact Research Grant, University of Malaya Research Grant, FRGS, E-science, LRGS and others, with her cumulative research funding amounting to at least RM5 million. These was followed by a couple of intellectual property rights under her belt.

Due to her experience in grant management, she had held several administrative posts such as the Head of Grant Management Unit and Head of Research Management Center, besides being a committee member in evaluating applications for FRGS, UMRG and the Science Fund in University of Malaya. Through her contribution to the field of science, she is a reviewer for a number of journals such as PLoSOne, Parasites & Vectors, Asia Pacific Journal of Molecular Biology & Biotechnology, International Journal of Tropical Disease & Health and others. Currently, she is also the academic editor for the Journal of Health and Translational Medicine (JUMMEC). She is acknowledged as an experienced researcher in the field of molecular biology and has been providing consultative services locally and internationally. .

Dr Lau is an active member of the Malaysian Society of Parasitology and Tropical Medicine since 2010 besides actively participating in the American Society For Cell Biology. In fulfilling her role as a scientist and an educator, she has successfully supervised 5 PhD and 5 Masters candidates to completion. Currently, there are 18 postgraduate students under her supervision. Her students are competent in conducting good research in diverse fields of molecular biology and parasitology, following the footsteps of their supervisor.

51TH MSPTM COUNCIL

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SCIENTIFIC PROGRAMME

DAY 1 (3RD MARCH 2015)
GRAND SEASONS HOTEL, KUALA LUMPUR

TIME	VENUE: GRAND BALLROOM
0800 – 0830	Registration of Delegates
0830 – 0845	Arrival of Guests
0845 – 0900	Arrival of Y. Bhg. Dr. Shahnaz Murad Deputy Director General of Health (Research and Technical Support), Ministry of Health Malaysia
0900 – 0910	Welcome Address by the President of MSPTM and Chairman of the Organizing Committee of the 51st Annual Scientific Conference of MSPTM **PROF. DR. YVONNE LIM AI LIAN**
0910 – 0930	Opening Speech and Officiation of the 51st Annual Scientific Conference of the Malaysian Society of Parasitology and Tropical Medicine **Y. BHG. DR. SHAHNAZ MURAD** Deputy Director General of Health (Research and Technical Support), Ministry of Health Malaysia
0930 – 0950	Citation and Presentation of Nadchatram Medal
0950 – 1020	Visit to Exhibition Booth / Poster Arena / Tea Break
1020 – 1040	**PRESIDENTIAL ADDRESS** **PROF. DR. YVONNE LIM AI LIAN**
1040 – 1120	**KEYNOTE ADDRESS** **Chairperson: PROF. DR. YVONNE LIM AI LIAN** Department of Parasitology, Faculty of Medicine, University of Malaya **Tropical Infections In Malaysia: Trends And Analysis** **DR. SURESH KUMAR** Infectious Disease Unit, Department of Medicine, Hospital Sungai Buloh, Selangor
	SESSION 1: UPDATES ON EMERGING PARASITIC DISEASES IN MALAYSIAN HOSPITALS **Moderator: DR. SURESH KUMAR** Infectious Disease Unit, Department of Medicine, Hospital Sungai Buloh, Selangor
1120 – 1135	**S 1.1 INVITED SPEAKER 1** **Updates On Emerging And Re-Emerging Parasitic Diseases In University Malaya Medical Centre (UMMC), Kuala Lumpur, Malaysia** **PROF. DR. JAMAIAH IBRAHIM** Department of Parasitology, Faculty of Medicine, University of Malaya
1135 – 1150	**S 1.2 INVITED SPEAKER 2** **Granulomatous Amoebic Encephalitis In A Healthy Child** **PROF. DR. NORHAYATI MOKTAR** Department of Parasitology and Medical Entomology, Faculty of Medicine, Universiti Kebangsaan Malaysia

1150 – 1205	**S 1.3 INVITED SPEAKER 3** **Gigantic Amoebic Liver Abscess In Pregnancy** **DR. CHIAM KENG HOONG** Department of Internal Medicine, Hospital Keningau, Sabah
1205 – 1245	**DISCUSSION**
1245 – 1400	Visit to Exhibition Booth / Poster Arena / Lunch
1400 – 1430	**PLENARY 1** **Chairperson: PROF. DR. FONG MUN YIK** Department of Parasitology, Faculty of Medicine, University of Malaya **Moving In And Renovating: Invasion And Remodeling Of The Human Erythrocyte By The Malaria Parasite** **PROF. DR. ALAN F. COWMAN** The Walter and Eliza Hall Institute of Medical Research, Melbourne, Australia
	SESSION 2: MALARIA **Venue: Grand Ballroom** **Chairperson: DR. TAN TIAN CHYE** Department of Parasitology, Faculty of Medicine, University of Malaya
1430 – 1440	**S 2.1** The Performance Of HRP2-Based RDT On *Plasmodium falciparum* Isolates From Tehama Region, Yemen **Wahib M Atroosh**
1440 – 1450	**S 2.2** Imported Malaria In Sarawak, 2009-2013 **Ooi Choo Huck**
1450 – 1500	**S 2.3** Evaluation Of Malaria Rapid Diagnostic Test Based On Detection Of PfHRP2 And pLDH In A Meso Endemic Malaria In Indonesia **Kurniawan A**
1500 – 1510	**S 2.4** Prevalence Of Simian Malaria Parasites In Long Tailed Macaques In Hulu Selangor District, Selangor **Rumana A**
1510 – 1520	**S 2.5** Potency Of *Garcinia mangostana* L Rind Ethanolic Extract And Its Hexane Fraction As Antimalaria In Mice Inoculated With *Plasmodium berghei* **Tjahjani S**
1520 – 1530	**S 2.6** Genetic Diversity Of Merozoite Surface Protein-1 Gene Block 2 Allelic Types In *Plasmodium falciparum* Isolates From Malaysia And Thailand **Goh XT**
1530 – 1540	**S 2.7** *Plasmodium knowlesi* Cases In South Kalimantan, Indonesia **Rita Kusriastuti**
	SESSION 3: VETERINARY PARASITOLOGY **Venue: Seasons 1** **Chairperson: PROF. DR. BAHA LATIF** Faculty of Medicine, Universiti Teknologi MARA
1430 – 1440	**S 3.1** Fluke Infection Of Large Ruminants In Kuala Terengganu: A Preliminary Result **Ariff Z**

S 2.3
EVALUATION OF MALARIA RAPID DIAGNOSTIC TEST BASED ON DETECTION of PfHRP2 AND pLDH IN A MESO ENDEMIC MALARIA IN INDONESIA

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[2]*Dept. of Parasitology, Faculty of Medicine, Sam Ratulangi University, Manado, Indonesia*

Accurate diagnosis is important for successful malaria control program and case management where microscopic examination is not available or feasible. This study aimed to evaluate Pan/Pf malaria RDT based on detection of Pf HRP-II dan pLDH and compared with microscopic result. Blood samples were collected during 6-months period in 2014 from patients suspected for clinical malaria in two primary health care (Puskesmas) and from a survey among primary school students in the same district in North Sulawesi, a meso endemic area for malaria. Thick and thin blood smears were made and examined by two well trained microscopist and the rapid test was performed following the procedure in the kit manual using finger prick blood samples. Discordant results from two readers were corrected with the third microscopist. The result showed that the number of samples obtained varies between months where many positive samples and cases with malaria symptoms obtained in July – August and very few samples positive for malaria between October–December. Total prevalence of malaria among the patients with clinical symptoms was 39% (n= 208) and 5.5% on the survey among the primary school children (n=103). The Pf HRP2-pLDH RDT based malaria RDT was very sensitive to detect *Plasmodium* infection among samples with clinical symptoms however it was less sensitive among the survey population. The specificity was lower than its sensitivity. The parasite count was generally low among the population surveyed while those with clinical symptoms were high. Further analysis will be discussed.

S 2.4
PREVALENCE OF SIMIAN MALARIA PARASITES IN LONG TAILED MACAQUES IN HULU SELANGOR DISTRICT, SELANGOR

Rumana A[1], Rajes Q[1*], Khaw LT[2], Sekaran SD[3], Sitam FT[4], Yvonne AL Lim[2], Wan Sulaiman WY[2], Wong KT[5] and Indra V[2]

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Malaria is a vector-borne parasitic disease which is prevalent in many developing countries. Recently, it has been found that *Plasmodium knowlesi*, simian malaria parasites can be life threatening to humans. Long tailed macaques which are widely distributed in Malaysia are the natural hosts for simian malaria, including *Plasmodium knowlesi*. The aim of present study was to determine the prevalence of simian malaria parasites in long tailed macaques in the district of Hulu Selangor, Malaysia. A total of 70 *Macaca fascicularis* were initially screened for genus *Plasmodium* by PCR using a genus specific primer. Forty of these were positive (57%). These 40 samples were then subjected to polymerase chain reaction (PCR) targeting the 18S ribosomal RNA genes to detect all five simian malaria parasites namely, *P. knowlesi, Plasmodium inui, Plasmodium cynomolgi, Plasmodium coatneyi* and *Plasmodium fieldi* . All five species of simian malaria parasites were detected. Of these, *P. inui* was the predominant (57.5% of 40), followed by *P. knowlesi* (52.5%), *P. fieldi* (47.5%), *P. cynomolgi* (45%) *and P. coatneyi* (40%). A total of six macaques had mono-infection with *P. knowlesi* (2), *P. cynomologi* (2) *and P. coatneyi* (2). Four of the macaques had dual infections while seven had triple infections. Two macaques were infected with all five species. The infections in the macaques were lower than most previous studies. Further work on these samples is ongoing.