

Malaysian Society of Parasitology and Tropical Medicine  
(Persatuan Kajiparasit dan Perubatan Tropika Malaysia)

# Newsletter

Issue 2, 2008

Malaysian Society of Parasitology  
and Tropical Medicine  
c/o Institute for Medical Research  
Jalan Pahang 50588  
Kuala Lumpur, Malaysia.  
[www.msptm.org](http://www.msptm.org)

Issue 2, 2008

(for members only)

Editor ~ Reuben Sharma

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## Presidents Message 45<sup>th</sup> MSPTM Council 2008/09

On behalf of the 45<sup>th</sup> MSPTM council (2008-2009) and its members, I would like to thank the previous MSPTM council for their valuable contribution to the society. I have retired as the Assistant Director of Zoo Negara Malaysia on the 1<sup>st</sup> of June 2008. As of 2<sup>nd</sup> June 2008, I have accepted a position as an Associate Professor in the Faculty of Medicine, Universiti Teknologi MARA, Shah Alam, Selangor.

The 44<sup>th</sup> Annual Scientific Seminar went off very well at the Grand Seasons Hotel, Kuala Lumpur from the 4<sup>th</sup> to 5<sup>th</sup> March 2008. It was well participated by both members and non-members. I would like to congratulate Dr. Nazni Wasi Ahmad (immediate past president) the chairperson, and the members of her organizing committee for the excellent organization of the seminar. A special thanks to the Director of IMR and their staff for their wonderful help. The theme of the 44<sup>th</sup> Annual Scientific Seminar was "The Impact of Climate Change on Tropical Disease". We had 44 oral presentations and 29 posters covering on Medical Entomology, Transgenic Mosquitoes, Parasitology, Forensic Entomology, Acarology and Clinical Research. The Seminar was officiated by the Director of IMR, KL.

MSPTM would like to thank Dr. P. Chandrawathani, Deputy Director of VRI, Ipoh for organizing and conducting a pre-conference workshop on "Novel approaches to the control of helminth parasites of livestock" on 26<sup>th</sup> to 29<sup>th</sup> February 2008 at Casuarina Hotel, Ipoh. This was well attended. As a result, the proceeding was published as a supplement in the Tropical Biomedicine. I congratulate the Editor, Dr. Indra Vythilingam and the Assistant Director, Mr John Jeffery for their effort.

The following members namely Prof. Dr. Mohd Zahedi Daud, Mr. Jahangir Kamaldin and

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### Corporate members

Sumitomo (M) Sdn Bhd  
BASF (M) Sdn Bhd  
TreeMed Sdn Bhd  
BP Automation Sdn Bhd  
IPSH Gasmaster Sdn Bhd

Cik Nurulaini bt Raimy were co-opted into the council. To date the council has met nine (9) times.

On the 9<sup>th</sup> May 08 the council called for a Past Presidential Advisory meeting. It was well attended by many Past Presidents. A number of issues were discussed which the council will be acting on. The meeting ended with a dinner at the PJ Club, which was sponsored by Dato' Prof Dr C P Ramachandran. The council would like to thank him for his generosity.

Our condolences to the family of late Prof Dr Robert Desowitz one of our Honorary member who passed away on 24<sup>th</sup> March 08. Tropical Biomedicine Volume 25 No.2 carried an obituary on him.

The 3<sup>rd</sup> ASEAN Congress of Tropical Medicine and Parasitology was held at Bangkok, Thailand on 22<sup>nd</sup> and 23<sup>rd</sup> of May 2008. The president was unable to attend the congress, since he was discharged from Hospital Kuala Lumpur (HKL) after 12 days of admission for a Lar Gibbon bite at his right arm. The Air Asia ticket was burnt. On 17<sup>th</sup> June 2008, MSTPM conducted South East Asia Dengue Summit 2008 in the Mandarin Hotel, Kuala Lumpur. This was fully sponsored by Bio-Rad. Health officials from South East Asia and world dengue experts took part in the round table discussion.

With this introductory message, I look forward to meeting up with all of you at the coming Seminars. Please actively participate in all the events which we will be organizing this year. With very best wishes and thank you.

**Assoc. Prof. Dr. S. Vellayan**  
**President MSTPM 2008-2009**  
**c/o Faculty of Medicine**  
**Universiti Teknologi MARA, (UiTM),**  
**Shah Alam, Selangor, Malaysia**

### ***New Corporate Members 2008***

The MSPTM welcomes the following corporate members and thank them for their valuable contribution to the society:

**TreeMed Sdn. Bhd., Selangor**  
**IPSH GASTMASTER Sdn. Bhd., Selangor**  
**BP Automation Sdn. Bhd., Penang**

## **5<sup>th</sup> International Workshop: Novel Approaches to the Control of Helminth Parasites of Livestock 2008**

*~ Dr P. Chandrawatani ~*

The 5<sup>th</sup> International Workshop: Novel Approaches to the Control of Helminth Parasites of Livestock 2008 that was jointly organised by Veterinary Research Institute and Malaysian Society of Parasitology and Tropical Medicine was held successfully at the Impiana Casuarinas Hotel, Ipoh on the 26<sup>th</sup> to 29<sup>th</sup> February 2008.

A total of 80 world-renown scientists from 17 countries participated in the 3 day workshop that had been officiated by the Director General, Department of Veterinary Services, Malaysia. The topics discussed in the workshop were **Novel Diagnostic Techniques, Targeted Treatment, Managing Refugia, Vaccines and Immunology, Neutraceuticals/Natural Products with Anti Helminth Properties, Anthelmintic Resistance, Practical Solutions for Helminths in Smallholder Livestock System and Application of Marker Assisted Selection for Parasite Resistance.**

Besides discussion, there were also farm visits to the government-owned goat farm at Goat Unit, Infoternak Farm, at Sungai Siput and a private-owned goat farm at Tambun. On the last day of the workshop, the participants were taken to VRI for a quick tour.

### **Comments on the organizing of the workshop**

*"This international workshop is an excellent opportunity to exchange ideas and learn a lot on this specific area of parasitology." Dr. Felipe Torres-Acosta, University of Yucatan, Mexico.*

*"It has been very good. The relatively small number of participants has the advantage of everyone having the opportunity to meet and talk with most of the participants. This is ideal." Dr. Andrew Greer, Moredun Research Institute, Scotland.*

*"Excellent interactions. Small intimate environment encouraged discussion and exchange." Dr. Ray Kaplan, University of Georgia, USA.*

### Advice on control of parasitism to the farms visited

“Be more careful in the wet season and try natural alternative on the animals” *Dr. Leyla Rios de Alvarez, Universidad Central de Venezuela.*

“Seek local expert advice and use products and processes that fit the farm operation” *Dr. Stephen Burman, Fort Dodge Australia.*

“Adopt the recommendations generated by local research that best suit the farm’s goal and management practices.” *Dr. Frank Jackson, Moredun Research Institute, Scotland.*

“Monitor the parasite level. Take advantage of the free service from local government advisors and scientists. Learn the latest options (chemical and non-chemical) to help with parasite control” *Dr. Rob Woodgate, Australia.*

“Needs good extension and advices, especially for question and answer on products and their efficacy. Nutrition is important to raise immunity and performance (as Urea Molasses Block). Monitor and monitor” *Dr. David Emery, University of Sydney, Australia.*

“Practice cut and carry. Use local or other resistant breeds. Use local natural products with anthelmintic activity. Rotate anthelmintic, use correct dosage, buy good quality of drugs” *Prof. Pierre Dorny, Institute of Tropical Medicine, Belgium*

### Novel Diagnostic Techniques 5<sup>th</sup> International Workshop: Novel Approaches to the Control of Helminth Parasites of Livestock 2008

~ Ian Colditz ~

The importance of diagnostics methods were supported by many discussants. In addition, Brown Besier acknowledged a strong need for new diagnostics. Use of combined diagnostics methods was proposed, for instance combining FAMACHA with measures of productivity and FEC (Felipe Torres Acosta). There is surprisingly poor use of faecal egg counts in the US and UK, due to a combination of causes including time delays, lack of faecal egg counting skills in the veterinary sector and cost (Ray Kaplan, Frank Jackson). While very important for farmers, faecal egg count reduction tests have even poorer adoption (Brown Besier). The importance of

combining FECRT with larval copro-cultures was emphasized (Ray Kaplan). The need to provide information to aid interpretation of fecal egg counts and the incorporation of egg counts into a worm management strategy was stressed by several speakers (Chandra, Lewis Kahn). Jim Miller asked for an update on research on copro-antigens as a measure of worm burden. The challenge for new tests to be cheap and user-friendly was noted (Ian Colditz). The need for standardization of the McMaster test was seen as an important issue in many countries (Zafar Iqbal, Felipe Torres Acosta).

In summary, the workshop discussion stressed the importance of greater uptake of faecal egg counts, better standardization of methods, integration of FEC into management practices, better provision of interpretation services to help farms make best use of FEC results and development of new diagnostic tests, particularly those that can be used on farm.



*Participants of the Novel Approaches Workshop*

### Dengue Summit 2008, Kuala Lumpur

~ Dr S. Vellayan ~

Dengue Summit 2008 was jointly organized by the MSPTM and Bio-Rad Laboratories (Singapore) Pte Ltd on 17th June 2008 at the Oriental Mandarin Hotel, Kuala Lumpur. It was a one day event. The MSPTM President delivered a keynote address on Dengue and its threat in South East Asia.

Dr. Phillippe Dussart spoke on the importance of early diagnosis and Dengue Infected Patient management. Dr. Ng Lee Ching gave a paper on the importance of employing the right tool at the right time. There was a round table discussion and the South East Asian countries’ representatives shared their experience on dengue

Management in their respective countries. The entire discussion and the recommendations will be presented in a proceeding. The president then presented certificate to all the participants. He then closed the Summit and Bio-Rad hosted a dinner at the Saloma Theatre Restaurant, KLCC. The Dengue Summit 2008 had a very good coverage by The New Straits Times prior and after the function. Prof Dato' C.P Ramachandran, gave an intensive interview to the NST on the control of dengue in Malaysia.



Participants at the Dengue Summit 2008, Kuala Lumpur

### MSPTM Mid-Year Seminar

The MSPTM Mid-Year seminar was held successfully on the 29<sup>th</sup> of October 2008 at Dewan Ungku Omar, Institute for Medical Research, Kuala Lumpur. It was well attended by over 150 participants from various local institutions. The president Dr S. Vellayan chaired the seminar. The following are abstracts of the three lectures that were presented at the MSPTM Mid-Year seminar 2008.



### Chikungunya- it takes two to tango

Lee, H.L., Rohani, A., Khadri, M.S., Nazni, W.A., Rozilawati, H. & Wan Norafikah, O.  
*Medical Entomology Unit & WHO Collaborating Centre for Vectors, Infectious Disease Research Centre, Institute for Medical Research, Jalan Pahang, 50588 Kuala Lumpur, Malaysia. [leehl@imr.gov.my](mailto:leehl@imr.gov.my)*



Like dengue, chikungunya infection, a mosquito-borne disease, has now emerged as a major public health problem recently. The disease was first reported in 1952 in Tanzania and in the succeeding years, slowly spread to other parts of the world, notably to South and South-east Asia. Thousand of cases were reported from India and the French Reunion Island in the last 3 years.

In Malaysia, although serological evidence of the virus was detected in 1975 and 1980, no cases were seen. The first outbreak in Malaysia was reported in 1998/1999 in Port Klang, followed by another outbreak in Perak in 2006 and by 2008, the disease was reported nationwide. By 20 September 2008, a total of 1975 cases were detected. Johor recorded the highest number of 1098 cases (55.6%). Although the signs and symptoms of chikungunya infection are similar to dengue, no haemorrhagic or fatal cases are reported in Malaysia to date. So far, the virus was isolated from field-collected *Aedes albopictus* adults only, though *Ae aegypti* can be laboratory-infected. Adults of *Culex quinquefasciatus* were not infected when fed with the virus. Co-infection of both dengue and chikungunya viruses in *Aedes* adults was not detected. Similarly, transovarian transmission of chikungunya virus was not observed in lab-infected *Aedes*.

The chikungunya virus was isolated for the first time from 4 monkey sera collected from Kuala Lipis, implicating possible zoonotic

reservoir and transmission, similar to dengue. The recent surge of chikungunya is attributed to the increasing spread of *Ae albopictus* possibly due to increase in rainfall and breeding sources. In the absence of an effective vaccine and specific treatment, the only option to control chikungunya is vector control.

This paper updates recent research on chikungunya vectors and its control:

(1) *Vector and virologic surveillance in mosquitoes*

Early detection of chikungunya infection in mosquito vectors prior to human cases can be used as early warning so that remedial control measures can be undertaken. Development of RT-PCR has greatly enhanced rapid detection of chikungunya genomes in mosquitoes. Recently, a RT-PCR kit was developed in Malaysia for monitoring of chikungunya infection in mosquitoes. Other surveillance methods which included ovitrap, sticky ovitrap, outbreak prediction models and GIS/GPS have greatly enhanced early warning capability.

(2) *Novel control technologies*

For years, adulticiding & larviciding were compartmentalised and conducted separately and in most cases, tend to be less effective. Simultaneous application of adulticide and larvicide appears to be able to optimise the outcome. The combination of a chemical adulticide such as pyrethroids and a larvicide such as *Bacillus thuringiensis* H-14 (*Bti*) has been shown to exhibit synergistic effects in *Aedes* control. On the other hand, the availability of *Bti* has also enabled large scale preventive application of this agent as *Bti* is innocuous. Resistance of mosquito vectors to chemical insecticides can now be screened rapidly with biochemical test kits developed by Institute for Medical Research, Malaysia.

(3) *Basic Research*

Recent bionomics study of the vectors indicated that the biting habits of the vectors remain unchanged. The flight range of both vectors was studied in the field and indicated that in general they are short-range flyers and the present insecticide application coverage is sufficient. Other basic research looked into the possibility of introducing genetically sterile *Aedes* mosquitoes to suppress the field mosquito population to level below the transmission threshold. Such knowledge may provide new insights and avenues for the design of more effective control technologies.

## ***Plasmodium knowlesi* – how serious a problem currently, as malaria is disappearing**

**Indra Vythilingam**

*Parasitology Unit, Infectious Diseases research Centre, Institute for Medical Research, Jalan Pahang, Kuala Lumpur. Malaysia*



*Plasmodium knowlesi* was known to be infectious to humans by blood passage in the laboratory since 1931 but the first natural infection in human was reported only in 1965 from Malaysia. However, at that time it was thought that naturally acquired knowlesi malaria infection will be rare. In 2004 a large focus of naturally acquired human *Plasmodium knowlesi* was reported from Sarawak, Malaysian Borneo. Now human cases of knowlesi malaria have been reported from most states in peninsular Malaysia. *Anopheles latens* and *Anopheles cracens* have been incriminated as vectors of *P. knowlesi* in Kapit Sarawak and Kuala Lipis, Pahang, Peninsular Malaysia respectively. Both species of the mosquitoes belong to the leucosphyrus group and bite humans as well as monkeys. These mosquitoes bite monkeys at ground level and at the canopy. The long-tailed macaque monkeys from Kuala Lipis were infected with *P. knowlesi*. The circumsporozoite gene of *P. knowlesi* from humans, monkeys and mosquitoes were phylogenetically indistinguishable. Most of these cases are occurring in malaria free areas where humans may have lost their immunity. Appropriate steps have to be taken to control the spread of simian malaria among humans. WHO has targeted to eliminate malaria globally by 2015. Thus, this zoonotic transmission has to be given serious consideration in order to achieve that target.

## The World of Sarcocystosis: New techniques for diagnosis of muscular sarcocystosis

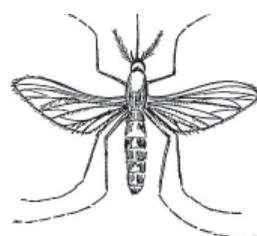
Bahaa Latef

Faculty of Medicine, Universiti Teknologi MARA (UiTM) 40450 Shah Alam, Selangor, Malaysia.



Sarcocystosis is a zoonotic disease caused by the protozoa *Sarcocystis*. The parasites found in the tissues of mammals, birds and reptiles and have a two-host cycle (intermediate and definitive hosts). Asexual stages develop in intermediate hosts after they ingest the sporocyst stage from the definitive-host feces and start the formation of intramuscular cysts (microscopic and macroscopic). Cysts in meat ingested by a definitive host initiate sexual stages in the intestine leading to the formation of the sporocysts that excreted in the feces. Humans may serve as intermediate or definitive hosts for various *Sarcocystis* species. Cysts are found in tongue, skeletal and cardiac muscles when humans are the intermediate host.

Different methods were used for diagnosis of **microscopic muscular sarcocystosis** including : squeezing, muscle squash (trichinoscopy), peptic digestion and serological tests. In this study new technique was used to extract the cystozoites (spores) from microscopic cysts in infected animal organs (oesophagus, diaphragm, heart, skeletal muscle).



## Wellcome Trust Report, UK

### Monkey malaria widespread in humans and potentially fatal

A potentially fatal species of malaria is being commonly misdiagnosed as a more benign form of the disease, thereby putting lives at risk, according to research funded by the Wellcome Trust and the University Malaysia Sarawak. Researchers in Malaysia studied more than 1000 samples from malaria patients across the country. Using DNA-based technology they found that more than one in four patients in Sarawak, Malaysian Borneo, were infected with *Plasmodium knowlesi*, a malaria parasite of macaque monkeys, and that the disease was more widespread in Malaysia than previously thought. Infections were most often misdiagnosed as the normally uncomplicated human malaria caused by *P. malariae*.

Malaria, which kills more than one million people each year, is caused when *Plasmodium* parasites are passed into the bloodstream from the salivary glands of mosquitoes. Some types, such as *P. falciparum*, found most commonly in Africa, are more deadly than others. *P. malariae*, found in tropical and sub-tropical regions across the globe, is often known as 'benign malaria' as its symptoms are usually less serious than other types of malaria.

Until recently, *P. knowlesi* was thought to infect only monkeys, in particular long-tailed macaques found in the rainforests of South-east Asia. Natural infections of man were thought to be rare until human infections were described in one area in Sarawak. However, in a study published today in the journal 'Clinical Infectious Diseases', Professors Janet Cox-Singh and Balbir Singh - with colleagues at the University Malaysia Sarawak and three State Departments of Health in Malaysia - have shown that *knowlesi* malaria is widespread in Malaysia.

Under the microscope, the early parasite stages of *P. knowlesi* look very similar to *P. falciparum*, the most severe form of human malaria, while the later parasite stages are indistinguishable from the more benign *P. malariae*. Misdiagnosis as *P. falciparum* is clinically less important as *P. falciparum* infections are treated with a degree of urgency and *P. knowlesi* responds to the same treatment. However, misdiagnosis as the more benign slower growing parasite *P. malariae* is a problem.

*P. knowlesi* is unprecedented among the malaria parasites of humans and non-human primates as it reproduces every 24 hours, and one of the features of fatal *P. knowlesi* infections is the high number of infected red blood cells in these patients. Therefore, even a short delay in accurate diagnosis and treatment could lead to the rapid onset of complications, including liver and kidney failure, and death. Using DNA detection methods, Professor Cox-Singh and colleagues found malaria infection with *P. knowlesi* to be widely distributed in Malaysian Borneo and mainland Malaysia, sometimes proving fatal. In addition, single human infections have been reported in Thailand and Myanmar.

“I believe that if we look at malaria infections in South-east Asia more carefully, we will find that this potentially fatal type of the disease is more widespread than is currently thought,” says Professor Cox-Singh. “Given the evident severity of the illness that it causes, I would recommend that doctors treating patients with a laboratory diagnosis of *P. malariae* remain alert to the possibility that they may be dealing with the potentially more aggressive *P. knowlesi*. This would be particularly important in patients who have spent time in the forest fringe areas of South-east Asia where the non-human primate host exists.”

### **ANNOUNCEMENT**

#### **The 45<sup>th</sup> MSPTM Annual Conference & AGM**

**18<sup>th</sup> and 19<sup>th</sup> March 2009**

**Grand Seasons Hotel, Jalan Pahang,  
Kuala Lumpur**

#### **Theme**

*The Impact of Animal Hosts on  
Disease Transmission and  
Public Health*

**&**

#### **Pre-Conference workshop**

**16<sup>th</sup> and 17<sup>th</sup> March 2009**

*Forensic Entomology*

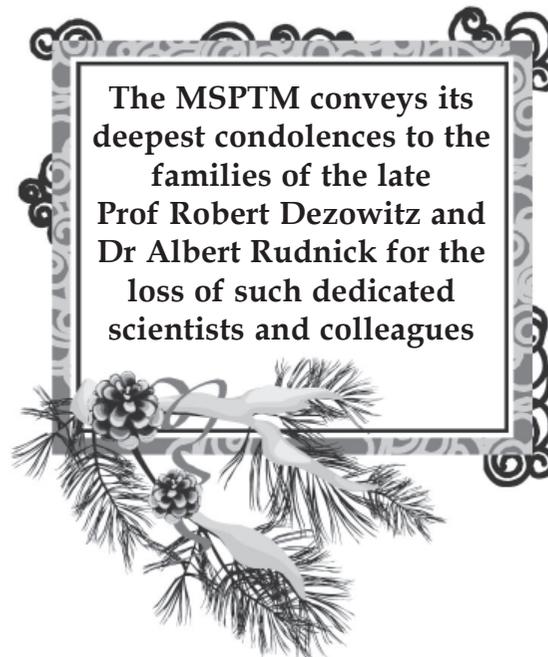
Contact Dr Nazni Wasi Ahmad,  
IMR to register for this workshop  
[nazni@imr.gov.my](mailto:nazni@imr.gov.my)

*places are limited, act NOW*

### **Upcoming Parasitology and Tropical Medicine Conferences 2007/08**

- 3-7 Feb 2009 **4th International Congress on Leishmania & Leishmaniasis (WorldLeish 4)**  
Lucknow, India  
[www.worldleish.org](http://www.worldleish.org)
- 13-16 Feb 2009 **International Meeting on Emerging Diseases and Surveillance (IMED 2009)**  
Vienna, Austria  
[//imed.isid.org](http://imed.isid.org)
- 22-26 Mar 2009 **Drug Discovery for Protozoan Parasites**  
Breckenridge, Colorado, USA  
[www.keystonesymposia.org](http://www.keystonesymposia.org)
- 8-13 Aug 2009 **22<sup>nd</sup> Congress of the World Association for the Advancement of Veterinary Parasitology (WAAVP)**  
Calgary, Canada  
[www.waavp2009.com](http://www.waavp2009.com)
- 6-10 Sept 2009 **6th European Congress on Tropical Medicine and International Health**  
Verona, Italy  
[www.festmih.org/verona2009](http://www.festmih.org/verona2009)
- 2-6 Nov 2009 **5th MIM Pan- African Malaria Conference**  
Nairobi, Kenya  
[www.mimalaria.org/eng/events.asp](http://www.mimalaria.org/eng/events.asp)

The MSPTM conveys its deepest condolences to the families of the late Prof Robert Dezowitz and Dr Albert Rudnick for the loss of such dedicated scientists and colleagues



## Members Updates

### Assoc Prof Dr S. Vellayan now lectures at UiTM

Dr S Vellayan served in Zoo Negara Malaysia for the past 27 years and retired on the 1st June 2008. He started on 1<sup>st</sup> Oct 1981 as the Zoo Vet, later as the Head of Zoo Hospital, Head of Zoology and Veterinary Services. From 2003 he was the Assistant Director and Acting Zoo Director till he retired. On 2<sup>nd</sup> June 2008 he joined the Faculty of Medicine, UiTM, Shah Alam as an Associate Professor. Here he teaches Medical Parasitology to the 2<sup>nd</sup> Year MBBS Students. He also teaches Veterinary Pharmacology to the 3<sup>rd</sup> Year Pharmacy Student at the Faculty of Pharmacy, UiTM. He is also involved in research at the Danga Bay Petting Zoo, Johor Baru and at the Sunway Wildlife Interactive Zoo, Subang Jaya.

### Dr Indra Vythilingam joins NEA (Singapore)

Our Honorary Editor for the Tropical Biomedicine journal has left the Institute for Medical Research (IMR) to join the Environmental Health Institute (EHI), National Environment Agency (NEA) Singapore as a Principal Research Scientist. Dr Indra has attained international recognition for her work on malaria and we wish her every success in her new position. From now on, all manuscripts for Tropical Biomedicine must be sent to Dr Indra at: [editor@msptm.org](mailto:editor@msptm.org) as an attachment.

## Notice Board

### MEMBERSHIP SUBSCRIPTION

Dear MSPTM members,

A gentle reminder that you are required to pay up your membership subscription by the 1<sup>st</sup> of January 2009. We have sent out emails and letters to remind you of this, and according to our constitution membership in arrears of 2 years or more may be terminated. Please act NOW. The society depends on you and your support. Contact Dr Tan Tian Chye at [tantianchye@um.edu.my](mailto:tantianchye@um.edu.my) (treasurer) for further details or to check your membership status.

### Contribution of Articles

*The MSPTM Newsletter thrives on the support of its members. Everyone is invited to contribute articles, photographs, comments and vacancy adverts which may be of interest to the Society. We also encourage researchers to submit updates on research projects and publications, so that this newsletter may serve as a portal for disseminating current information on parasitology and tropical medicine in Malaysia.*

### MSPTM Website

Visit the MSPTM website for updates and online access to current issues of *Tropical Biomedicine*

[www.msptm.org/](http://www.msptm.org/)