25th year
Of The Microscopy
Society Malaysia

SILVER JUBILEE

25th Scientific Conference of the Microscopy Society Malaysia 7th – 8th December 2016

PERSATUAN MIKROSKOPI MALAYSIA

Abstract and Programme Book

"Creating Sustainable World through Science and Technology of Microscopy"

In conjunction with the celebration of the 25 years of the society:

Silver Jubilee Commemoration

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DAY 2: 8 December 2016(Thursday) – Morning (8.30am – 12.30pm)

Time	Programme
8.30 – 9.00	**Keynote 3 – Prof. Dr. Ir. Srimala Sreekantan** *Insights on Photocatalyst Development and the significance in addressing various issues in environment, energy and biomedical field* **Chairperson:** Prof. Dr. Radzali Othman **Melati Room**
9.00 – 9.30	**Keynote 4 – Prof. Dr. Nakisah Mohd Amin** *Revealing cytotoxicity and genotoxicity of selected environmental pollutants on Acanthamoeba spp by multi-approach analyses: in vitro study* **Chairperson:** Dr. Mohd Shukri Baba **Melati Room**
9.30 – 10.00	**Keynote 5 – Prof. Dr. Kuwano** *Channelling Contrast and Electron Backscatter Diffraction Analysis of Deformed Single Crystal of Tin* **Chairperson: Assoc. Prof. Dr. Hing Hiang Lian** **Melati Room**
10.00 -10.30	**Tea Break & Poster Session**
10.30-11.00	**Keynote 6 – Prof. Dr. Norhana Yahya** *Green Urea Synthesis Using Iron Oxide Nano-Wires as Catalysts* **Chairperson:** Assoc. Prof. Dr Zainovia Lockman **Melati Room**
11.00 – 11.30	**Keynote 7 – Prof. Dr. Mohd Hasbullah Haji Idris** *Magnesium –the Myth and Reality* **Chairperson:** Assoc. Prof. Dr. Abdah Akim **Melati Room**

LIST OF POSTER

#	Poster ID	Title/Presenter
		Life Sciences and Biology
1	P-LS-1	**Benefit Health Effect of Cocoa** Abdah Md Akim, Zainal Baharom, Fatin Mardhiah Bt Ahmad Ramli Universiti Putra Malaysia, MALAYSIA
2	P-LS-2	**Antiparasitic Assessment of Nerolidol Against the Growth And Survival of Haemoflagellate Protozoa, Trypanosoma Evansi in Mice** Mohd Shukri Baba, Zainal Abidin Abu Hassan, Normalawati Shamsudin International Islamic University Malaysia, MALAYSIA
3	P-LS-3	**Mechanism(s) of Action Involved in the Antimycobacterial Activity of Akar Mempelas (Tetracera Macrophylla)** S.F.Sabran, M.F. Abu Bakar, M. Mohamed & A.C.Linatoc Universiti Tun Hussein Onn Malaysia (UTHM), MALAYSIA
4	P-LS-4	**Anti - Inflammatory Effect of Berberis Vulgaris Extract in Vivo** N.H.Mohd Nor, M.N. Sabariah, M.T. Eusni Rahayu and F. Othman Universiti Putra Malaysia, MALAYSIA
5	P-LS-5	**Microscopic Evidence on the Cockroaches as Mechanical Vector for Mites** A.R. Farooq and M.Y. Afzan International Islamic University Malaysia, MALAYSIA
6	P-LS-6	**Histomorphological Appearance of Rat Kidney Exposed to Potash (Sodium Carbonate)** H.B. Ishaya, T.W. Jacks, M.O Attah and S.M. Chiroma University of Maiduguri, Maiduguri, Nigeria. UPM Serdang, MALAYSIA
7	P-LS-7	**Preventive Effect Nigella Sativa Oil Extract on Histopathological Changes Induced by Valproic Acid on Mice Placenta** S.S. Bello, F. Othman, F.F.A. Jesse, B.B. Hamidon and E. Zolkapli Universiti Putra Malaysia, MALAYSIA
8	P-LS-8	**Spinal Cord of Flying and Flightless Local Birds: Motor Neurons Analysis** Durriyyah Sharifah Hasan Adli, Bibi Shaswani Zulbadri and Rosli Ramli University of Malaya, MALAYSIA

P-LS-2

Antiparasitic Assessment of Nerolidol Against the Growth And Survival of Haemoflagellate Protozoa, *Trypanosoma Evansi* in Mice

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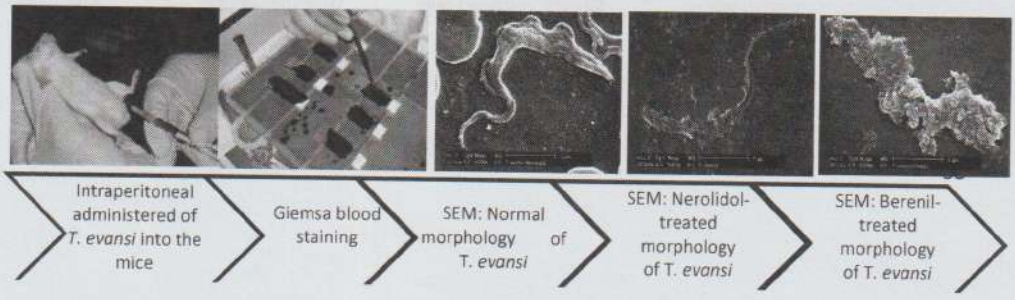
Keywords: *Nerolidol, Berenil, Trypanosoma evansi*

Cell morphological changes are frequently used as indirect indicators of the effect of studied materials on targeted cells. In this study, antiparasitic effects of active compound, namely nerolidol or 3,7,11-trimethyl-1,6,10-dodecatrien-3-ol ($C_{12}H_{26}O$), in which extracted from cardamom seeds (*Eiettariacardamomum*) was *in-vivo* compared with commercial anti-trypanosomal drug, Berenil, on the growth and survival of the haemoflagellate protozoa *Trypanosoma evansi* in mice. Groups of male ICR strain mice aged 6 – 8 weeks with 20 – 25g body weight (bw) were administered with the parasite (5.0×10^3 *T. evansi* per mouse) and orally given pre-, concurrent- or post-infection treatments with nerolidol (0.1 ml 8.8 µg/ml nerolidol per mouse). Stained blood slides were prepared and examined under the light (Zeiss Primo Starr attached with Canon LA-DC58F digital camera) and electron (Phillips XL30) microscopes for the evaluation of specified parameters. The results showed that the micein negative control group (untreated but infected mice) succumbed to the *T. evansi*infections with rapid increase of parasitaemia and survived in a short period of time. Mice in the pre-infection treatments with nerolidol not only demonstrated longer pre-patent periods but also exhibited the longest survival times (61.58 ± 0.2 days) as compared to those of the mice in the groups receiving concurrently or post-infection treatments. There was also a positive relationship ($p \leq 0.05$, $n = 6$) between the mice survival time and the ability to inhibit the parasites growth in this group.The morphological changes of *T. evansi* cells were observed where the undulating membrane was destroyed and the cell became crescent-shaped. Finally, both of the posterior and anterior ends were tapered before the flagellum destroyed and disintegrated in which lead to death of the cells. The cell morphological changes in berenil-treated mice was occurred much earlier (2nd - 3rd hour post-treatment) and totally disappeared from the blood circulation within 5 - 6 hour later. The destruction of these parasite cells allowed the mice survived more than 300 days of observation. The results from this study suggest that nerolidol has a stronger anti-parasitic activity against *T. evansi*by causing the destruction of the cells. Further studies are required to elucidate the mechanism of action of nerolidol on these cell structures.



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