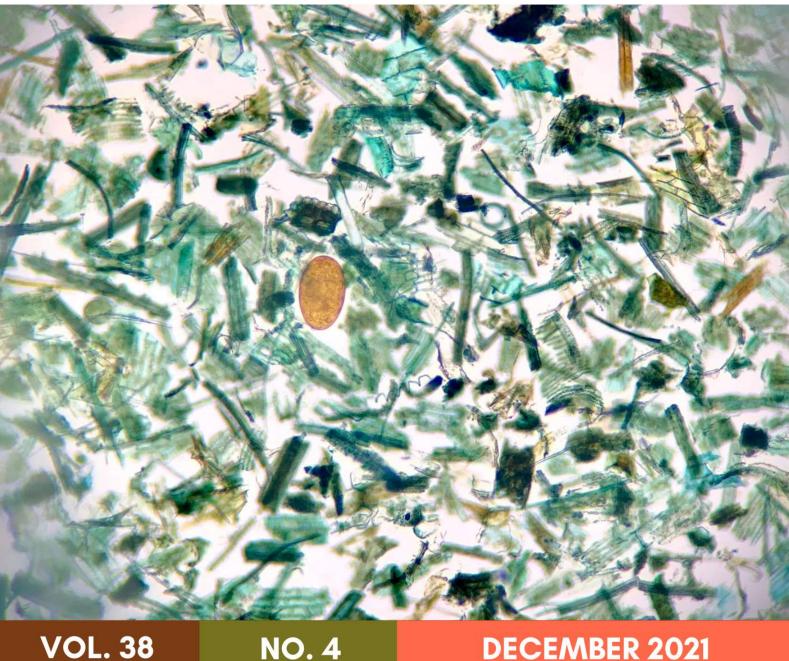
Tropical Biomedicine



NO. 4

DECEMBER 2021

eISSN: 2521-9855

Tropical Biomedicine

Official organ of the Malaysian Society of Parasitology and Tropical Medicine

Editor in Chief

Chandrawathani Panchadcharam, DVM, PhD

Associate Editor

Low Van Lun, PhD

Journal Production Team

Chen Chee Dhang, PhD (Managing Editor)

Chang Kum Wah, MSc

Victoria Foo

Editorial Board

Adela Ida Jiram, MMedSc Adzzie Shazleen Azman, PhD

Banchob Sripa, PhD

Chandramathi Samudi Raju, PhD

Cheong Fei Wen, PhD
David Lee Kim Sung, PhD
Heo Chong Chin, PhD
Indra Vythilingam, PhD
Hiroshi Yamasaki, PhD
Khairul Anuar Abdullah, PhD

Editorial Management Team

Tan Tiong Kai, PhD (Managing Editor)

Lau Koon Weng, PhD Premalatha Bathmanaban

Lee Han Lim, PhD
Lydia R. Leonardo, DRPH
Mak Joon Wah, MBBS, PhD
Nurhafiza Zainal, PhD
Ooi Hong Kean, DVM, PhD
Pairot Pramual, PhD
Petrus Tang, PhD
Pollie LM Rueda, PhD
Rahmah Noordin, PhD
Ravichandran Manickam, PhD

Reuben Sharma, DVM, PhD Sam Mohan, DVM, MSc Seleena Benjamin, MSc Sinniah Barathan, PhD Siti Nursheena Mohd Zain, PhD Stephen Ambu, PhD

Tan Kim Kee, PhD

Veeranoot Nissapatorn, MBBS

Information for Subscribers

- Tropical Biomedicine is now issued quarterly March, June, September and December.
- For manuscript submission, please visit https://msptm.org/journal/
- Correspondence concerning manuscripts of articles for publication should be sent to the Editor of Tropical Biomedicine by email: editor.msptm@gmail.com
- Correspondence concerning production of galley proof and payment of page charges should be sent to the production team of Tropical Biomedicine by email: production.msptm@gmail.com
- The journal, Tropical Biomedicine, is free and is available online in the MSPTM website (www.msptm.org)

Cover Illustration

Artwork presented by Mr. Naim bin Che Kamaruddin, Universiti Putra Malaysia

"The Golden Egg, A Perilous Gold Investment"

Liver fluke's (Fasciola sp.) egg can be easily identified with the help of microscopes because it is golden colour. Although it seems captivating to appreciate it's beauty, this egg will hatch and grow to manifest any mammals that accidentally consume the infective larvae predominantly ruminant livestock and humans ourselves. The juvenile and adult flukes cause damages to organs especially liver, consequently diminishing reproduction and production performance that somehow will lead to economic loss despite the zoonotic capability. Efforts to eradicate this golden egg is needed as investment to mitigate the economic impact and zoonoses risk caused by this parasite.

58th MSPTM COUNCIL MEMBER 2021/2022

President
Dr. Sam Mohan
Vice President
Dr. Chen Chee Dhang
Past President

Prof. Dr. Siti Nursheena Mohd Zain

Hon. Secretary

Dr. Nor Azlina Abdul Aziz

Hon. Treasurer Dr. Azdayanti Muslim

Council Members

Dr. Mehru Nisha

Assoc. Prof. Dato' Dr. S. Vellayan

Dr. Stanley Tan Tiong Kai Dr. Reuben Sharma Ms. Adela Ida Jeram Dr. Paul Cliff Simon Divis

Dr. Lucas Low Van Lun

Dr. Farah Hazigah Meor Termizi

CORPORATE MEMBER(S)

Agricultural Chemicals (M) Sdn. Bhd.

Tropical Biomedicine Copyright Notice

© Malaysian Society of Parasitology and Tropical Medicine 2021. *Tropical Biomedicine* is a gold open access journal. Articles published are licensed under a Creative Commons Attribution Non-commercial 4.0 International License (CC BY-NC 4.0) and are freely available to download, save, reproduce, and transmit strictly for non-commercial, scholarly, and educational purposes only. Reproduction and transmission of content for the above purposes are permitted with the condition that the author(s) and all original sources are duly credited. Permission must be obtained from the Malaysian Society of Parasitology and Tropical Medicine prior to the use, reproduction, or distribution of content for commercial purposes.

TROPICAL BIOMEDICINE

VOL. 38, NO. 4

Impact of <i>Allium sativum</i> ethanol extract on immuno-regulatory T cells and anti-inflammatory cytokine profile in murine schistosomiasis Hamad, R.S. and Abd El-Moaty, H.I.	476
Antibacterial activity and mechanism of action of trigonostemone against Staphylococcus aureus and Bacillus cereus	
Sangdee, A., Sangdee, K., Bunchalee, P. and Seephonkai, P.	484
Ease of use and validity testing of a point-of-care fast test for parasitic vaginosis self-diagnosis Hawash, Y., Jaafer, N. and Alpakistany, T.	491
African swine fever in backyard pigs of Sabah state, East Malaysia, 2021 Khoo, C.K., Norlina, D., Roshaslinda, D., Siti Suraya Hani, M.S., Zunaida, B., Mohd Hasrul, A.H., Pauzi, N.A.S., Roslina, H., Faizah Hanim, M.S. and Leow, B.L.	499
Larvicidal activity of the skin secretion of <i>Rhinella marina</i> and <i>Rhaebo guttatus</i> (Anura: Bufonidae) against the Brazilian malaria vector, <i>Anopheles darlingi</i> (Diptera: Culicidae) Trindade, F.T.T., Lucena, I.V., Rodrigues, M.M.S., Stábeli, R.G., Moreira-Dill, L.S., Soares, A.M.,	
Calderon, L.A. and Silva, A.A.E.	505
Review on diagnosis and molecular characterization of <i>Toxoplasma gondii</i> in humans and animals Uddin, A.H.M.M., Hossain, D., Ahsan, M.I., Atikuzzaman, M. and Karim, M.R.	511
Can Costus afer be used for co-treatment of COVID-19, its symptoms and comorbidities? A novel approach for combating the pandemic and implications for sub-Saharan Africa Jannat, K., Hasan, A., Bondhon, T.A., Mahboob, T., Paul, A.K., Jahan, R., Nissapatorn, V., Pereira, M.L.,	
Wiart, C. and Rahmatullah, M.	540
SARS-CoV-2 seroprevalence and antibody trends in vaccinated, multi-ethnic healthcare employees Beh, C.C., Zulkufli, N.S., Loh, L.M., Cheng, K.W., Choo, L.M., Cheah, M.W., Siow, L.K. and Yon, R.	552
Trend and pattern of melioidosis seropositivity among suspected patients in Malaysia 2015 – 2019 Hadi, F.S., Ghazali, S., Ahmad, N. and Ramli, S.R.	561
Bite envenomation by <i>Latrodectus geometricus</i> (Araneae: Theridiidae) spiders in Malaysia Mokhtar, A.S., Muslimin, M., Mat-Saat, A.Y., Ghazali, A-R.M., Ismail, A.K. and Abdul-Aziz, N.M.	568
Molecular subtyping and phylogeny of <i>Blastocystis</i> sp. isolated from turkey (<i>Meleagris gallopavo</i>)	
populations in Penang, Malaysia Siti Alawiyah, J.A.N., Rauff-Adedotun, A.A., Aishah, S., Rusydi Abdul Hafiz, R., Zary Shariman, Y. and Farah Haziqah, M.T.	578
Molecular survey of head lice (<i>Pediculus humanus capitis</i>) infestation among disadvantaged children in Klang Valley, Malaysia Mokhtar, A.S., Sahimin, N., Hanapi, I.R.M., Lau, Y.L., Zain, S.N.M., AbuBakar, S. and Ya'cob, Z.	590
	330
Public health status of Myanmar refugees in South East Asia: A Malaysian case study Mohd Hanapi, I.R., Sahimin, N., Lewis, J.W., Lau, Y.L., Othman, J., Tedong, P.A. and Mohd Zain, S.N.	594
Scope of herbal disinfectants to fight against SARS-CoV2 virus Madhurya, L., Urvashisahu, Ezhilvendan, S., Sumithradevi, S. and Vivekbabu, C.S.	605
Evaluation of commercial serological assays in Malaysia for detection of anti-Zika virus antibodies Khoo, H.Y., Lee, H.Y., Khor, C.S., Tan, K.K. and AbuBakar, S.	613