



The SEAMEO Regional Tropical Medicine and Public Health Project was established in 1967 to help improve the health and standard of living of the peoples of Southeast Asia by pooling manpower resources of the participating SEAMEO member countries in a cooperative endeavor to develop and upgrade the research and training capabilities of the existing facilities in these countries. By promoting effective regional cooperation among the participating national centers, it is hoped to minimize waste in duplication of programs and activities. In 1992 the Project was renamed the SEAMEO Regional Tropical Medicine and Public Health Network.*

**SEAMEO=Southeast Asian Ministers of Education Organization*

THE SOUTHEAST ASIAN JOURNAL OF TROPICAL MEDICINE AND PUBLIC HEALTH

Editorial Panel

Honorary Editor	Tan Chongsuphajaisiddhi (Thailand)
Editor	Vicente Y Belizario (Philippines)
Executive Editor	Suvanee Supavej (Thailand)
Consulting Editor	Peter D Echeverria (Thailand)
Editorial Office	Vimolpatana Indradat (Administrator) The Southeast Asian Journal of Tropical Medicine and Public Health SEAMEO TROPMED Network 420/6 Ratchawithi Road Bangkok 10400, Thailand Tel: +66 (0) 2354 9197, 2354 9145, 2354 9146, 2644 4331, 2644 5135 Fax: +66 (0) 2354 4337, 2354 9144 E-mail: tmseameo@mahidol.ac.th Website: http://www.tm.mahidol.ac.th/seameo/publication.htm http://www.seameotropmednetwork.org

Editorial Board

Alejandro Herrin (Philippines), Chansuda Wongsrichanalai (Cambodia), David Evans (Switzerland), Dwip Kitayaporn (Thailand), Eduardo Gotuzzo (Peru), J Kevin Baird (Indonesia), Jong Yil Chai (Korea), May Ho (Canada), Mark Robson (USA), Mediadora Sanieel (Philippines), Michael Good (Australia), Myint-Lwin (Myanmar), Nicholas J White (UK), Nick Walters (USA), Pirom Kamolratanakul (Thailand), Pornthep Chanthavanich (Thailand), Prapon Wilairat (Thailand), Srisin Khusmith (Thailand), Stephen L Hoffman (USA), Stephen W King (Thailand), Virasakdi Chongsuvivatwong (Thailand), Yong Poovorawan (Thailand)

Advisory Board

Caridad A Ancheta (Philippines), CP Ramachandran (Malaysia), David Molyneux (UK), David Warrell (UK), HM Gilles (UK), Jane Baltazar (Philippines), Lye Munn Sann (Malaysia), Louis H Miller (USA), M Jegathesan (Malaysia), Santasiri Sornmani (Thailand), Soemilah Sastroamidjojo (Indonesia), Somei Kojima (Japan), Tsutomu Takeuchi (Japan), Walther H Wernsdorfer (Austria), Tang Lin Hua (China), Nina Gloriana (Philippines)

SEAMEO REGIONAL TROPICAL MEDICINE AND PUBLIC HEALTH NETWORK

TROPMED GOVERNING BOARD MEMBERS

BRUNEI	Dr HAJAH RAFIDAH BINTI HAJI GHARIFF
CAMBODIA	HE Prof Dr ENG HUOT
INDONESIA	Prof Dr IR MUHAMMAD ANIS, M MET
LAO PDR	Dr SOMCHANH XAYSIDA
MALAYSIA	Datuk Dr NOOR HISHAM ABDULLAH
MYANMAR	Dr KYAW KHAING
PHILIPPINES	Dr PAULYN JEAN B ROSELL-UBIAL
SINGAPORE	Prof JOHN EU-LI WONG
THAILAND	Dr AMNUAY GAJEENA
TIMOR LESTE	Dr JOAO MARTINS
VIETNAM	Dr TRAN THI GIANG HUONG

TROPMED CENTRAL OFFICE

Dr PRATAP SINGHASIVANON	<i>Secretary General/Coordinator</i>
Dr MA SANDRA B TEMPONGKO	<i>Deputy Coordinator</i>
Mrs VIMOLPATANA INDRADAT	<i>Publications</i>

The Southeast Asian Journal of Tropical Medicine and Public Health is published by the SEAMEO Regional Tropical Medicine and Public Health Network (SEAMEO TROPMED Network).

One annual volume comprises of six bi-monthly issues (January, March, May, July, September, and November). Annual subscription for 6 issues is USD 310.00 (including postage). Single copies USD 60.00. Subscription payment in US dollars must be made by credit card (VISA or MASTER). Use the order form on the last page of our journal and send to SEAMEO TROPMED Network, 420/6 Ratchawithi Road, Bangkok 10400, Thailand.

The Southeast Asian Journal of Tropical Medicine and Public Health has been selected for coverage in Thomson Reuters information services, beginning with Vol 40 (1) 2009: Science Citation Index (SciSearch®), Journal Citation Reports/Science Edition, and Current Contents®/Clinical Medicine, in addition to the existing inclusion in Biological Abstracts, BIOSIS Previews, and Zoological Record.

No part of this Journal may be reproduced in any form by photostat, microfilm or any other means.
ISSN: 0125-1562