

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) 23549197, 23549145, 23549146, 26444331, 26445135

Fax: +66 (0) 23544337, 23549144 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), Jong Yil Chai (Korea), May Ho (Canada), Mark Robson (USA), Mediadora Saniel (Philippines), Michael Good (Australia), Myint-Lwin (Myanmar), Nicholas J White (UK), Nick Walters (USA), 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), Jane Baltazar (Philippines), Lye Munn Sann (Malaysia), Louis H Miller (USA), M Jegathesan (Malaysia), Santasiri Sornmani (Thailand), Somei Kojima (Japan), Walther H Wernsdorfer (Austria), Nina Gloriana (Philippines)

SEAMEO REGIONAL TROPICAL MEDICINE AND PUBLIC HEALTH NETWORK

TROPMED GOVERNING BOARD MEMBERS

BRUNEI Dr HAIAH RAFIDAH BINTI HAII GHARIFF

CAMBODIA HE Prof Dr ENG HUOT

INDONESIA Prof Dr TJANDRA YOGA ADITAMA

LAO PDR Dr SOMCHANH XAYSIDA

MALAYSIA Datuk Dr NOOR HISHAM ABDULLAH

MYANMAR Dr KYAW KHAING

PHILIPPINES Dr PAULYN JEAN B ROSELL-UBIAL

SINGAPORE Prof IOHN EU-LI WONG

THAILAND Dr SUWANNACHAI WATTANAYINGCHAROENCHAI

TIMOR LESTE Dr JOAO MARTINS

VIETNAM Dr TRAN THI GIANG HUONG

TROPMED CENTRAL OFFICE

Dr PRATAP SINGHASIVANON Secretary General/Coordinator

Dr MA SANDRA B TEMPONGKO Deputy Coordinator

Mrs VIMOLPATANA INDRADAT Publications

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