

MALAYSIAN JOURNAL OF
Medicine and Health Sciences
Vol. 20 No. 6, November 2024

MALAYSIAN JOURNAL OF

Medicine and Health Sciences

Vol. 20 No 6 / November 2024

Malaysian Journal of Medicine and Health Sciences Vol. 20 No. 6, November 2024



Faculty of Medicine and Health Sciences
Universiti Putra Malaysia
43400 UPM Serdang
Selangor Darul Ehsan
Malaysia
<http://medic.upm.edu.my/>

UPM Press
Universiti Putra Malaysia
43400 UPM Serdang
Selangor Darul Ehsan
Malaysia
<http://penerbit.upm.edu.my>

PENERBIT
UPM
UNIVERSITI PUTRA MALAYSIA
PRESS



A scientific journal published by Universiti Putra Malaysia Press

About the Journal

The Malaysian Journal of Medicine and Health Sciences (MJMHS) is published by the Faculty of Medicine and Health Sciences, Universiti Putra Malaysia. The main aim of the MJMHS is to be a premier journal on all aspects of medicine and health sciences in Malaysia and internationally. The focus of the MJMHS will be on results of original scientific research and development, emerging

Editorial Board

Editor in Chief:

Prof. Dr. Rukman Awang Hamat

Coordinator:

Dr. Tan Kit Aun

Members:

Prof. Dr. Normala Ibrahim

Prof. Dr. Christopher Lim Thiam Seon

Prof. Dr. Ching Siew Mooi

Prof. Dr. Sharmili Vidyadaran

Prof. Dr. Loh Su Peng

Prof. Dr. Andee Dzulkarnaen Zakaria

Assoc. Prof. Dr. Rajesh Ramasamy

Assoc. Prof. Dr. Sethu Thakachy Subha Assoc.

Prof. Dr. Nor Afiah Mohd Zulkefli Assoc. Prof.

Dr. Wan Aliaa Wan Sulaiman Assoc. Prof. Dr.

Ling King Hwa

Assoc. Prof. Dr. Habibah Abdul Hamid Assoc.

Prof. Dr. Zubaidah Nor Hanipah Assoc. Prof.

Dr. Intan Hakimah Ismail

Assoc. Prof. Dr. Ho Yu Bin

Assoc. Prof. Dr. Karmegam Karuppiah

Assoc. Prof. Dr. Omar Ahmed Fahmy Ahmed

Assoc. Prof. Dr. Rafee Baharudin

Assoc. Prof. Dr. Sarva Mangala Praveena

Assoc. Prof. Dr. Roslaini Bin Abd. Majid Assoc.

Prof. Dr. Ashley Edward Roy A/L Soosay Assoc.

Prof. Dr. Pike-See Cheah

Dr. Navin Kumar A/L Devaraj

Dr. Raymond Yeak Dieu Kiat

Dr. Razif Abas@Buang

Dr. Sandra Maniam

Dr. Ruziana Masiran

Dr. Manraj Singh Cheema

Dr. Amilia Afzan Binti Mohd Jamil

Dr. Azlina Binti Yusuf

Dr. Fahisham Taib

Madam Shalin Lee Wan Fei

International Editorial Member

Prof. Dr. Hendrik Setia Budi

Assoc. Prof. Dr. Bipin T Varghese

Dr. Basmaa Hassan Mohammed Elwakil

International Advisory Board

Prof. Dr. Cecilia A. Essau

Prof. Dr. David Brendan Price

Prof. Dr. S Suresh Kumar

Assoc. Prof. Dr. Sean Semple

Dr. Martin Wong Chi Sang