

Foreword

Welcome to the 3rd 2021 issue for the *Pertanika Journal of Science & Technology (PJST)*!

PJST is an open-access journal for studies in Science and Technology published by Universiti Putra Malaysia Press. It is independently owned and managed by the university for the benefit of the world-wide science community.

This issue contains 47 articles; 5 review articles; 2 short communications and the rest are regular articles. The authors of these articles come from different countries namely India, Indonesia, Iran, Iraq, Malaysia, Nigeria, Pakistan, Thailand and Yemen.

Articles submitted for this issue cover various scopes of Science and Technology including: applied sciences and technologies; chemical sciences; earth sciences; engineering sciences; environmental sciences; information, computer and communication technologies; material sciences, mathematical sciences; and medical and health sciences.

The first article selected is on comparative analyses on synthetic membranes for artificial blood feeding of *Aedes aegypti* using digital thermo mosquito blood feeder (DITMOF). In this study, three synthetic membranes were compared (Parafilm-M, Polytetrafluoroethylene tape or PTFE tape and collagen sausage casing) to blood feeding *Aedes aegypti*. The membranes were incorporated with in-house developed device named as DITMOF to heat the cattle blood for mosquito feeding. Results showed that PTFE tape recorded the highest blood feeding rate ($95.00\% \pm 1.67\%$) with significant mean difference ($p < 0.001$) as compared to both Parafilm-M ($72.00\% \pm 2.60\%$) and collagen sausage casing ($71.50\% \pm 3.50\%$). However, there was no difference in term of fecundity for mosquito feed with all three membranes tested ($p=0.292$). Full information on this study is presented on page 2073.

A regular article titled “Spatial distribution of picophytoplankton in southeastern coast of peninsular Malaysia using flowcytometry” was written by Roswati Md Amin and co-researchers from Universiti Malaysia Terengganu. Picophytoplankton has been described as the smallest known autotrophic species; it is of great significance and present in all oceanic provinces. In this study, picophytoplankton was represented by *Synechococcus*, followed by picoeukaryotes and *Prochlorococcus*. The flow cytometry revealed a coastal–offshore gradient dominated by *Synechococcus*, followed by picoeukaryotes and *Prochlorococcus*. *Synechococcus* and picoeukaryote abundance was primarily distributed along the coast and progressively decreased seaward, whereas *Prochlorococcus* abundances showed a slight increasing trend from the middle parts of the study area to the open oceanic waters. The results of canonical correspondence analysis demonstrate that the total chlorophyll, pH, dissolved oxygen, and temperature would favor the abundance of picophytoplankton assemblages in the study areas. Detailed information on this study can be found on page 2103.

Rauda A. Mohamed and co-authors from National Defence University of Malaysia had proposed *in silico* study of potential non-oxime reactivator for sarin-inhibited human acetylcholinesterase (AChE). Fourteen compounds have been screened via *in silico* approach for their potential as sarin-inhibited human acetylcholinesterase poisoning antidotes. A commercially available antidote, 2-PAM was used for the comparison. Results revealed that (*R*)-Boc-nipecotic acid shows shorter nucleophilic attack distance and high binding affinity implying that this compound could be an alternative antidote towards sarin inhibited-hAChE. Despite the commercial charged oxime, 2-PAM, which might present better nucleophilicity towards sarin-inhibited AChE, the uncharged (*R*)-Boc-nipecotic acid is presumed to penetrate the blood-brain barrier and worth to be proven experimentally. Further details of the article are available on page 2217.

We anticipate that you will find the evidence presented in this issue to be intriguing, thought-provoking and useful in reaching new milestones in your own research. Please recommend the journal to your colleagues and students to make this endeavour meaningful.

All the papers published in this edition underwent Pertanika's stringent peer-review process involving a minimum of two reviewers comprising internal as well as external referees. This was to ensure that the quality of the papers justified the high ranking of the journal, which is renowned as a heavily-cited journal not only by authors and researchers in Malaysia but by those in other countries around the world as well.

A special appreciation to all the International Advisory Board of PJST (2018-2020) for serving the journal for the past three years in ensuring Pertanika plays a vital role in shaping the minds of researchers, enriching their lives, and encouraging them to continue their quest for new knowledge. Also, we welcome the new International Advisory Board on board. We hope that their involvement and contributions towards Pertanika would not only improve its quality but also support the development efforts in making it an international journal of good standing.

We would also like to express our gratitude to all the contributors, namely the authors, reviewers, Editor-in-Chief and Editorial Board Members of PJST, who have made this issue possible.

PJST is currently accepting manuscripts for upcoming issues based on original qualitative or quantitative research that opens new areas of inquiry and investigation.

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