

Foreword

Welcome to the second issue of 2022 for the Pertanika Journal of Science and 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; three case studies, four review articles, and the rest are regular articles. The authors of these articles come from different countries namely Brazil, Egypt, Germany, Hungary, India, Indonesia, Iraq, Malaysia, Nigeria, Philippines, Saudi Arabia and United Kingdom.

Mohammad Nasir Abdullah and his colleagues from Universiti Teknologi MARA, Malaysia, presented a regular article titled "Identification of blood-based multi-omics biomarkers for Alzheimer's disease using Firth's logistic regression. This study developed an AD prediction model based on the integrated blood-based multi-omics dataset involving 32 AD patients and 15 non-AD subjects. The integrated multi-omics dataset consists of 16 transcript genes, 14 metabolites, and nine cytokines. Due to the complete separation and multicollinearity issues, Firth's logistic regression model was then developed to predict AD using the principal components. The model revealed 18 potential biomarkers of AD, which showed an upregulated risk in the AD group compared to the non-AD subjects. The possibility of using these biomarkers as early predictors of AD is discussed. The detailed information of this study is available on page 1197.

The next article discussed the multidrug-resistant strains inhibition by *Bacillus* species from the gut of *Oreochromis niloticus* and *Pomacea canaliculate*. This study examined the antibacterial properties of *Bacillus* species isolated from the guts of snails (*Pomacea canaliculata*) and fish (*Oreochromis niloticus*) against three (3) resistant bacterial pathogens: methicillin-resistant *Staphylococcus aureus* (MRSA), *Escherichia coli* producing extended-spectrum beta-lactamase (ES β L *E. coli*), and *Pseudomonas aeruginosa* producing metallo beta-lactamase (M β L *P. aeruginosa*) using a cross-streak method and agar diffusion assay (CFS). In the cross-streak method, the *Bacillus* isolates inhibited MRSA and ES β L *E. coli* with an average zone of inhibition of 9.57 ± 33.40 mm and 5.07 ± 32.69 mm, respectively. The CFS of ten *Bacillus* species demonstrated anti-MRSA activity but was ineffective against ES β L *E. coli* and M β L *P. aeruginosa*. Details of this study are available on page 1657.

Another article that we wish to highlight is “Dehydration isopropyl alcohol to diisopropyl ether over molybdenum phosphide pillared bentonite” by Hasanudin et al. from Indonesia. In this study, synthesis of molybdenum phosphide pillared bentonite (MoP-Bentonite) catalysts has been conducted with variations of MoP-Bentonite concentrations of 2, 4, 6, and 8 mEq/g. The catalysts were used to dehydrate isopropyl alcohol to produce diisopropyl ether (DIPE). The characterization showed that the pillarization of bentonite using molybdenum phosphide had been successfully synthesized and inherently increased the surface area, pore volume, diameter volume, and total acidity of the Na-Bentonite catalyst. In addition, the MoP-Bentonite catalyst showed good catalytic activity for DIPE production. Further details of the investigation can be found on page 1739.

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.

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.

Chief Executive Editor

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