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EDITORIAL WORDS

Advancing Natural Heritage, Clinical Optimization, and *In Silico* Innovations

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Editor in Chief
Borneo J Pharm

Assalamu'alaikum Wr. Wb.

Alhamdulillahirabbil 'alamin. The next edition of **Borneo Journal of Pharmacy** (*Borneo J Pharm*) has been published in March 2026. This edition contains twelve articles spanning: Pharmacology-Toxicology, Pharmacognosy-Phytochemistry, Pharmaceutics, Analytical Pharmacy-Medicinal Chemistry, Microbiology Pharmacy, Natural Product Development, Community Pharmacy, and Clinical Pharmacy Practice. This edition includes writings from three countries: Indonesia, Malaysia, and the Philippines. The authors come from several institutions, including Universitas Muhammadiyah Surakarta, Universitas Muhammadiyah Pekajangan Pekalongan, Universitas Lambung Mangkurat, Universitas Islam Bandung, Universitas Hasanuddin, Akademi Farmasi Yarsi Pontianak, Universitas Jember, Universiti Sains Malaysia, Universitas Jenderal Ahmad Yani, Universitas Tanjungpura, Universitas Ahmad Dahlan, National Research and Innovation Agency (BRIN), Sekolah Tinggi Ilmu Kesehatan ISFI Banjarmasin, Universitas Airlangga, Universitas Surabaya, Our Lady of Fatima University, De La Salle University, Universiti Teknologi MARA, and Universitas Mulawarman.

This edition underscores the multifaceted nature of the pharmaceutical sciences in Southeast Asia, featuring research that seamlessly spans the "bench-to bedside-to-*silico*" spectrum. The articles in this issue highlight the immense potential of local and marine biodiversity, advancements in drug delivery systems, critical evaluations of clinical outcomes, and the evolving regulatory and predictive frameworks guiding therapeutic development.

Validating Bioactive Prospects and Chemodiversity in Regional Ecosystems

A significant portion of this issue is dedicated to the scientific validation of Southeast Asia's rich terrestrial and marine heritage, particularly focusing on optimal compound recovery and therapeutic applications for chronic metabolic and non-communicable diseases:

1. **pH-Modulation and Marine Extraction:** Research on *Rhizophora stylosa* (Mangrove) leaves demonstrates that altering solvent alkalinity influences metabolite solubility, showing that a pH 10 ethanolic system maximizes phenolic yields and radical-scavenging capacity while maintaining structural chromophore integrity. Complementing marine discovery, an evaluation of carrageenan extracts from nine edible seaweed species native to the Western Visayas catalogs distinct phytochemical fingerprints and free-radical-scavenging potential profiles via DPPH assays.

2. **Preclinical Validation of Antidiabetic and Anti-inflammatory Potency:** Combining empirical profiling with computer models, a study on *Tithonia diversifolia* (Insulin leaf) identifies key therapeutic flavonoids (hispidulin, luteolin, and genistein) and demonstrates their superior ability to inhibit α -amylase and intercept glycated hemoglobin (HbA1c) formation compared to standard glibenclamide. Additionally, the *in vivo* anti-inflammatory efficacy of *Syzygium polyanthum* (Salam) leaf extract is validated in animal models, demonstrating consistent reductions in carrageenan-induced paw edema.

Breakthroughs in Computational Chemistry and Bioinformatics

Moving beyond laboratory assays, this issue highlights the growing role of advanced data mining, virtual screening, and structural mathematical simulations in accelerating drug discovery:

1. **High-Throughput Docking and QSAR Modeling:** Research on *Pluchea indica* (Beluntas) uses an *in silico* library to screen 110 phytoconstituents, identifying competitive natural inhibitors of Angiotensin-Converting Enzyme (ACE) to treat hypertension. Similarly, structural molecular docking combined with Quantitative Structure-Activity Relationship (QSAR) mathematical frameworks evaluates newly synthesized *N*-(ethylcarbamothioyl)benzamide derivatives as dual estrogen- α and progesterone receptor inhibitors for targeted breast cancer therapy.
2. **Pharmacokinetic and Genomic Simulations:** A short communication maps the absorption, distribution, metabolism, excretion, and toxicity (ADMET) parameters of critical antiviral agents, such as Remdesivir and Favipiravir, and optimizes data on their active clearance and metabolite elimination profiles. Furthermore, an *in silico* bioinformatics pipeline analyzes deep genomic repositories (Ensembl, Haploreg, GTEx) to pinpoint specific single-nucleotide polymorphisms (SNPs) and structural variants driving neuropathic pain pathways in diabetic neuropathy.

Innovations in Chemical Synthesis and Topical Formulations

Connecting raw starting blocks with targeted delivery systems, researchers in this issue present key structural and formulation optimizations:

1. **Reflux Kinetics in Chemical Synthesis:** A study investigating the Knoevenagel-Doebner condensation reaction optimizes reflux timelines using malonic acid and 4-hydroxybenzaldehyde, defining the precise reaction durations needed to maximize the yield and analytical purity of synthesized 4-hydroxycinnamic acid.
2. **Polymer Base Optimization and Safety Screening:** In pharmaceuticals, an optimization matrix evaluates the combination of HAMINT™ and HPMC K100M polymers to enhance the physical stability and topical delivery of diclofenac sodium gel creams. Parallel to base optimization, the safety profile of facial cleansing gels containing ethyl acetate and ethanol fractions of *Citrus amblycarpa* peel is established using the *in vivo* Hen's Egg Chorioallantoic Membrane (HET-CAM) vascular assay to assess potential systemic mucosal irritation.

Advancing Clinical Pharmacy and Public Health Screening

In the clinical and community practice sectors, this issue features structural validation matrices and proactive screening tools designed to directly improve patient outcomes:

1. **Osteoporosis Screening in Community Pharmacy:** A cross-sectional pilot study in Malaysia utilizes the Malaysian Osteoporosis Screening Tool (MOST) within community pharmacies, effectively categorizing bone health risks in post-menopausal women while tracking the direct impacts of dietary intake and lifestyle choices.
2. **Medication Error Assessment in Geriatric Care:** Transitioning to Institutional Patient Safety, research outlines the formal expert validation of a structured Medication Error Assessment Tool within the Integrated Medicine Management (IMM) model. Utilizing multi-disciplinary expert panels, this framework establishes a reliable tool to significantly reduce clinical medication errors in geriatric patients suffering from Congestive Heart Failure (CHF).

The editorial board is fully aware that there is still room for improvement in this edition; hence, with all humility, we are willing to accept constructive suggestions and feedback to improve the publication in future editions. The editorial board would like to thank all editors, reviewers, and contributors of the scientific articles who have provided the repertoire in this issue. We hope that all parties, especially the contributors, will re-participate in the publication in the next edition, scheduled for June 2026.

Wassalamu'alaikum Wr. Wb.

Palangka Raya, March 2026

Editor-in-Chief

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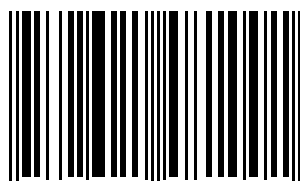
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