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# EDITORIAL WORDS

## Bridging Natural Potential, Clinical Evidence, and Regulatory Frameworks

*Dr. apt. Mohammad Rizki Fadhil Pratama, S.Farm., M.Si.*

*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 at November 2025. This edition contains ten articles: Pharmacology-Toxicology, Pharmacognosy-Phytochemistry, Pharmaceutical, Analytical Pharmacy-Medicinal Chemistry, Microbiology Pharmacy, Natural Product Development, Management Pharmacy, and Pharmaceutical Regulations. This edition includes writings from three countries: Australia, Indonesia, and Thailand. The authors come from several institutions, including Universitas Halu Oleo, Thammasat University, Politeknik Bina Husada Kendari, Universitas Mulawarman, Sekolah Tinggi Ilmu Kesehatan Buleleng, Universitas Hasanuddin, Universitas Mandala Waluya, Universitas Hang Tuah, Akademi Farmasi Surabaya, Universitas Bakti Tunas Husada, Universitas Muhammadiyah Banjarmasin, Institut Teknologi Bandung, Monash University, Universitas Muhammadiyah Surakarta, Universitas Airlangga, Universitas Lambung Mangkurat, Universitas Muhammadiyah Magelang, Khon Kaen University, Universitas Indonesia, and Indonesian Food and Drug Authority.

This edition underscores the multi-faceted nature of pharmaceutical sciences in Indonesia, featuring research that spans the "bench-to-bedside-to-policy" spectrum. The articles in this issue highlight the immense potential of local biodiversity, advancements in drug delivery systems, critical evaluations of clinical outcomes, and the evolving regulatory landscape governing traditional medicines.

### *Unveiling the Pharmacological Potential of Natural Resources*

A significant portion of this issue is dedicated to the scientific validation of Indonesia's rich natural heritage. Several studies focus on the exploration of bioactive compounds for non-communicable and infectious diseases:

1. **Anticancer and Antioxidant Discovery:** Research on *Pogostemon cablin* (Patchouli) from North Konawe reveals promising anti-inflammatory and anti-proliferative activities against breast cancer cells, supported by membrane stabilization mechanisms. Complementing this, an *in silico* study on *Moringa oleifera* (Kelor) utilizes molecular docking and dynamics to identify specific metabolites with high stability at estrogen receptors, offering potential pathways for breast cancer therapy. Furthermore, the underutilized leaves of *Metroxylon sagu* (Sago) are profiled for their phenolic and flavonoid content, demonstrating potent radical-scavenging activity that positions them

as a viable natural antioxidant source.

2. **Combating Infectious Diseases:** Addressing antimicrobial resistance, two studies investigate local flora. The *n*-hexane fraction of *Stenochlaena palustris* (Kelakai) demonstrates significant activity against MRSA biofilms, while ultrasound-assisted extraction of *Isotoma longiflora* (Kitolod) is optimized to target *Staphylococcus aureus* and *Salmonella typhi*, though further isolation of active compounds remains a priority.
3. **Gastroprotection and Systematic Reviews:** The protective effects of *Amorphophallus oncophyllus* (Porang) are highlighted in an *in vivo* study showing its ability to mitigate NSAID-induced duodenal mucosal injury. Additionally, a comprehensive review of *Lumbricus rubellus* (Red Earthworm) synthesizes a decade of preclinical and clinical data, confirming its diverse therapeutic roles, including fibrinolytic and hepatoprotective activities.

#### *Innovations in Pharmaceutical Formulation*

Moving beyond raw extracts to dosage form design, this issue features an innovative study on *Scylla serrata* (Mangrove Crab) shell waste. Researchers successfully developed a chitosan effervescent granule suspension, comparing wet and dry granulation methods to optimize physical characteristics such as flowability and pH, thereby enhancing the potential of this biopolymer as a consumer-friendly cholesterol management supplement.

#### *Clinical Outcomes and Healthcare Economics*

In the clinical sphere, an observational study at Dharmais Cancer Hospital provides a critical analysis of lung cancer management. By correlating treatment costs with survival rates across different cancer stages and interventions, this research highlights the economic burden of the disease and the complex relationship between high-cost interventions and survival time, offering data vital for healthcare planning.

#### *Strengthening the Regulatory Landscape*

Finally, to support the translation of traditional medicines into the market, this issue includes a strategic policy analysis. The study maps Indonesia's regulatory reforms (2020–2024) regarding traditional medicines, health supplements, and cosmetics. It concludes that the Food and Drug Authority (BPOM) is successfully shifting towards a governance model that balances strict compliance and safety with the encouragement of research and innovation, aligning with ASEAN harmonization standards.

Editorial boards are fully aware that there are still room for improvement in this edition, hence with all humility willing to accept constructive suggestions and feedback for improvements to the publication for the next editions. The editorial board would like to thank all editors and reviewers, and contributors of the scientific articles who have provided the repertoire in this issue. We hope that all parties, especially the contributors, could re-participate for the publication in the next edition on March 2026.

*Wassalamu'alaikum Wr. Wb.*

Palangka Raya, November 2025

Editor-in-Chief

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