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∴ EHMAP-12

# Kumpulan Abstrak

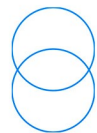
*Abstract Collection*

*Seminar Antarabangsa ke-12*

**Ekologi, Habitat Manusia dan  
Perubahan Lingkungan di Dunia Melayu**

*12<sup>th</sup> International Conference on Ecology, Human Habitat  
and Environmental Change in Malay World*

"TOWARDS A PARADIGM SHIFT IN ECOLOGY, HUMAN HABITAT AND ENVIRONMENTAL CHANGES IN MALAY WORLD"



**Batam - Indonesia, 25-26 Juli 2024**

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INDONESIA ●

# ABSTRACT COLLECTION

**12<sup>th</sup> International Conference on Ecology, Human Habitat  
and Environmental Charge in Malay World**



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*National University  
of Malaysia*

**Faculty of Fisheries and Marine, Universitas Riau, Indonesia  
Universiti Kebangsaan Malaysia  
2024**

## **Foreword from Chairperson of the Committee**

We give thanks to God Almighty, because by His mercy and grace, the Proceedings of 12th International Conference on Ecology, Human Habitat and Environmental Change in Malay World can finally be completed.

This proceeding contains 63 research article titles in both full paper and abstract form written by lecturers, academics and researchers from a number of universities in Indonesia and Malaysia, especially the University of Riau and the National University of Malaysia. All of these articles were presented in this seminar.

We would like to extend our heartfelt thanks to all the authors who have contributed their writings, shared new knowledge, and provided their experiences in this proceeding. We hope that these proceedings will serve not only as a valuable documentary record and a reference source for researchers but also as a means to disseminate new knowledge and ideas that will support the advancement of scientific development in the future.

We also extend our sincere gratitude to the drafting team for their hard work and dedication in publishing these proceedings within a limited timeframe.

**Chairperson of the Committee,  
Dr. Ir. Deni Efizon, M.Sc.**

## Foreword from the Dean of Fisheries and Marine Faculty

The 12th EHMAP Seminar featured two keynote speakers: Prof. Dr. Ir. Bintal Amin from Universitas Riau (UNRI) and Prof. Madya Asyaari Muhammad from ATMA Universiti Kebangsaan Malaysia (UKM); and two plenary speakers: Dr. Windarti, M.Sc. (UNRI) and Prof. Madya Zuliskandar (ATMA UKM).

We would like to extend our sincere gratitude to all the presenters and seminar participants for their valuable contributions. We hope that this seminar serves as a platform for exchanging scientific information among participants and that the outcomes will contribute to the advancement of science, particularly in the field of environmental studies and related disciplines.

We also look forward to the continued success of this annual seminar, held in collaboration with the Fisheries and Marine Faculty of Riau University and ATMA Universiti Kebangsaan Malaysia, and hope that it will be conducted regularly and sustainably.

Thank you.

**Dean,  
Prof. Dr. Ir. Rifardi, M.Sc.**

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*Anissa Abdul Aziz, Khalilah Zakariya, Norhanis Diyana Nizarudin,  
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## Ethnomedicine: Extraction of *Acacia Auriculiformis* Leaves and Phenolic Compounds Screening for Pharmacological Uses

Razanah Ramya<sup>1\*</sup>, Rashidi Othman<sup>2</sup>, Farah Ayuni Mohd Hatta<sup>3</sup>, Wan Syibrah Hanisah Wan Sulaiman<sup>4</sup> and Nur Hanie Mohd Latiff<sup>4</sup>

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**Abstract:** *Acacia auriculiformis*, sometimes known as akasia kuning by the Malay, is a globally widespread tree with a diverse variety of therapeutic properties. Traditionally, it has been used to address a range of medicinal issues, including the use of the root to alleviate aches, pains, and sore eyes and the use of the bark to cure rheumatism. The phytochemicals found in different portions of plants have significant potential to function as medicinal remedies for various ailments and exhibit pharmacological effects. However, there is a lack of studies reported on *A. auriculiformis* leaf. This research aims to examine the phenolic compounds and determine the antibacterial activity of the leaf extract from *A. auriculiformis*. The leaf extract of *A. auriculiformis* was extracted with aqueous extraction before being re-extracted using different solvent polarities: petroleum ether, ethyl acetate, and butanol. Then, the extract was subjected to chromatographic analysis to determine its functional group using FT-IR and its phenolic content using HPLC. The antibacterial activity was assessed using the disc diffusion technique. The analysis revealed the existence of an aliphatic hydrocarbon at a wavelength of 2927.49 cm<sup>-1</sup> in *A. auriculiformis*. The leaf extract had a total phenolic content of 409.18 µg GAE/g DW, and four phenolic acids were identified: 4-Hydroxybenzoic acid, Caffeic acid, trans-p-Coumaric acid, and Vanillic acid. The *A. auriculiformis* leaf extract exhibited high antibacterial activity, as evidenced by the presence of inhibition zones measuring between 3 and 10 mm for all investigated bacterial pathogens (*S. aureus*, *S. epidermidis*, *E. coli*, MRSA, and *P. aeruginosa*). Overall, the leaves of *A. auriculiformis* demonstrate promise as a possible source of phenolic compounds and exhibit significant antibacterial activity, indicating their potential use in producing these compounds.

**Keywords:** *akasia kuning*; ethnomedicine; natural product phytochemical; pharmacology; phenolic compounds.