

# 5<sup>th</sup> Symposium of Young Researchers on Pharmacognosy



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## BOOK OF ABSTRACTS



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# **BOOK OF ABSTRACTS**

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**Preliminary Phytochemical and Pharmacological Investigation of *Homalanthus giganteus***

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*Homalanthus giganteus*, a species within the Euphorbiaceae family, thrives in wet tropical regions of Southeast Asia and the Pacific, particularly in the Lesser Sunda Islands, including Bali, Nusa Tenggara, and Timor within the Indonesian archipelago. Traditionally, *H. giganteus* has been used in Indonesia to treat fever [1]. Our research group has published the only available data on this species, specifically regarding its antimicrobial and antiproliferative properties. Our findings demonstrated that *H. giganteus* extracts exhibit significant potential against diverse microbes, with minimum inhibitory concentrations (MIC) ranging from 12.5 to 500 µg/mL and show remarkable activity (IC<sub>50</sub> 0.92 µg/mL) against the COLO 205 cell line [2]. However, the specific phytochemicals responsible for these activities have not yet been identified.

To address this gap, our research aims to isolate and identify the bioactive phytochemicals in *H. giganteus*. This involves separating the plant extracts using High-Performance Liquid Chromatography (HPLC) and characterizing the isolated compounds through Nuclear Magnetic Resonance (NMR) spectroscopy. A total 4 compounds have been isolated and characterized, which include one fatty acid, one triterpene and two diterpenes. Identifying these phytochemicals is crucial for understanding the mechanisms underlying the medicinal properties of *H. giganteus* and could lead to the development of new therapeutic agents. This study represents a significant step toward the pharmacological exploitation of *H. giganteus*, providing insights that could enhance its application in drug development.

**References**

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[2] Wirasisya, DG, Kincses A, et al. *Plants* **2023**, 12(22):3836.