

# 3<sup>rd</sup> Symposium of Young Researchers on Pharmacognosy



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## BOOK OF ABSTRACTS



**3rd Symposium of Young Researchers on Pharmacognosy**

# **BOOK OF ABSTRACTS**

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### ***In vitro* antimicrobial screening for bioactive secondary metabolites of selected Euphorbiaceae species from West Nusa Tenggara, Indonesia**

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In our days, new and re-emerging infectious diseases are rising very rapidly. Therefore, there is an urgent need to discover newer antimicrobial compounds having diverse chemical structures and novel mechanisms of action. The emergence of multiple drug-resistant strains in human pathogenic organisms has further necessitated searching for new antimicrobial substances from natural sources [1]. The family Euphorbiaceae has attracted great interest from many researchers due to its significant antibacterial, antifungal and antiviral activities [2]. The present study is aimed at the investigation of eight species, *Macaranga tanarius*, *Mallotus mollissimus*, *M. rufidulus*, *Homalanthus giganteus*, *Shirakiopsis indica*, *Euphorbia* sp., *E. atoto*, and *E. hypericifolia*, belonging to the Euphorbiaceae family for bioactive secondary metabolites with antimicrobial activity. In this experiment, the dried and grounded plant materials were percolated using methanol and, after evaporation, subjected to solvent-solvent partition resulting in four fractions of different polarity (*n*-hexane, chloroform, ethyl acetate, and aqueous-methanol). The antimicrobial activity of the 32 fractions was evaluated using disc diffusion method against thirteen bacterial and four fungal strains. The highest antimicrobial activity was detected in chloroform and ethyl acetate fractions from *Shirakiopsis indica* against *Candida glabrata* ATCC 2001. The most sensitive strain was *Candida glabrata* and *Candida parapsilosis*; at least one fraction of all species showed any activity against these fungi.

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#### **References**

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