

PRELIMINARY PHYTOCHEMICAL SCREENING OF THE POTENTIAL MEDICINAL PLANTS OF THE MELANAU IN PULAU BRUIT, SARAWAK, MALAYSIA

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ABSTRACT

Potential medicinal plants are widely used by Melanau community in Pulau Bruit, Sarawak, Malaysia and their biological and phytochemical properties have not been thorough evaluated. By studying the presence of phytochemical, the uses of it in traditional treatment can be explained scientifically. Preliminary phytochemical screening was performed on ethanolic extracts of leaves of *Acanthus ebracteatus*, *Clinacanthus nutans*, *Derris trifoliata*, *Erigeron Canadensis*, *Gynura procumbens*, *Lygodium microphyllum*, *Macaranga pruinosa*, *Poikilospermum cordifolium* and the rhizomes of *Boesenbergia pulchella* and *Etlingera littoralis*. The phytochemical compounds were determined using conventional chemical tests. Alkaloids were detected in all tested plant with various cloudiness of precipitation except *Macaranga pruinosa*. *Acanthus ebracteatus* contains highest concentration of alkaloid. Flavonoids were detected in all tested plant with various strength of the color except for *Gynura procumbens*. *Acanthus ebracteatus* and *Derris trifoliata* contains highest concentration of flavonoids. Saponins were detected in *Acanthus ebracteatus*, *Clinacanthus nutans*, *Derris trifoliata*, *Erigeron Canadensis*, *Gynura procumbens* and *Macaranga pruinosa* with various length of froth. Tannins were detected in all samples with either brownish-green or blue-blue black colour appearance. It can be concluded that all tested plants do content promising pharmacology properties based on the presence of various secondary metabolites.

Key words: Melanau, Bruit, Sarawak, medicine, phytochemical

INTRODUCTION

Natural products have been used by native cultures as a source of remedies for thousands of years, dating back to ancient empires in Mesopotamia, Egypt, China, Greece, and Rome (Raju and Rao, 1986). Malaysian medicinal plant researcher has been documented in many publications regarding specific ethnomedical applications, extraction and pharmacological activities of the potential plants. For instance, *Clinacanthus nutans* is widely known in traditional medicine in Malaysia due to its medicinal properties in treating skin rashes, insect

and snake bites, and skin lesions caused by virus. Based on the traditional uses of *Gynura procumbens*, it seems to possess high therapeutic potential for treatment of various diseases making it a target for pharmacological studies aiming to validate and provide scientific evidence for the traditional claims of its efficacy (Tan *et al.*, 2016). Although a specific plant might have a reported use, other parts of the plant and additional applications of the plant specifically from Kampung Bruit, Sarawak remain uninvestigated, or a plant may not have a recorded ethnomedical use. The current research involved the collection, identification, extraction and phytochemical evaluation of the plant extracts derived primarily from a random

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