

RESEARCH ARTICLE

Bioactive compounds screening, antimicrobial activities of leave extract from two palatable plants: *Piper betle* and *Murraya koenigii* (Curry leaves)

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ABSTRACT:

Introduction: *Piper betle* Linn is one of the most commonly used compounding plants for ethno-medical purposes, with its extract generally used in modern products to enrich their functional efficacy. The extraction methods always lead to differences in the antimicrobial efficacy of methanol extracts of bioactive compounds. **Purpose:** The study was conducted to screen for bioactive compounds and determine their antimicrobial efficacy in a methanol extract of *Piper betle* and *Murraya koenigii* leaves from five different regions. **Methodology:** The phytochemical screening done according to the procedure that is implied in from Patil, et.al, with minor modifications by the researchers of the current study. Antimicrobial activity was determined; efficacy was measured by disc diffusion analysis. **Results:** Phytochemical screening revealed the presence of saponin, tannin, terpenoids, alkaloids and flavonoids in the extracts. The methanolic extract of betel leaves from all the selected regions except from Bau exhibited antimicrobial activities. Among them, extract from Kuching and Simunjan have no effect on *E. coli*. The methanolic extract of curry leaves from Kuching, Balai ringai and Bau have antimicrobial activities against *Staph aureus* and those from Balai ringai is also active against *E.coli*. **Conclusion:** Although there were previous reports of phytochemical screening and antimicrobial activities from the extract of these plants, there were still lack of research conducted on the specimens especially from our local community (Sarawak). The outcome of this study will help us to identify the bioactive compounds of the local samples and give us some pictures of their activities on how to ensure these plants can be brought forward based on the origin of the sample.

KEYWORDS: Bioactive Compounds Screening, Antimicrobial Activities of Leave Extract, Palatable Plants, *Piper betle* and *Murraya koenigii*.

INTRODUCTION:

Plants play a significant role in providing nutrients for living organisms; they balance the ecosystem by means of releasing oxygen and absorbing carbon dioxide, thereby improving the quality of the air. Plants play an imperative role in the ecosystem between humans and animals, like carrying out photosynthesis to produce oxygen for the use of other Earth organisms. There are varieties of plants being used in various human cultures

around the world for medicinal purposes. It has therapeutic effects on health and wellbeing, which are fulfilled by raw eating, drying, and using ingredients in food, and so on. Plants contain useful bioactive (phytochemical) compounds, which have the potential to be developed into more effective modern medicine. Plants contain useful bioactive (phytochemical) compounds, which have the potential to be developed into more effective modern medicine. Despite great progress in western medicine, the use of herbal medicines is still popular. Nowadays, scientists are increasingly focusing on natural products in order to look for new leads to develop better drugs with fewer side effects. The primary benefits of using plant-derived medicines are that they are relatively safer than synthetic chemical-based compounds and also more cost effective.