

P-20**Bioactive Metabolites from Endophytes Associated with Rubiaceae Plants from Uitm Puncak Alam Biological Reserve**

Fatimah BeBe M. Hussain^{1,*}, Sadia Sultan¹, Jean-Frédéric Faizal Weber¹ and Kalavathy Ramasamy²

¹*Atta-ur-Rahman Institute for Natural Product Discovery (RiND);* ²*Collaborative Drug Discovery Research (CDDR), Faculty of Pharmacy, Universiti Teknologi MARA, 43200 Puncak Alam, Selangor, Malaysia; E-mail: fati_mah2000@yahoo.com*

Plant endophytes are an important and novel resource of natural bioactive compounds. In the past two decades, many valuable bioactive compounds with antimicrobial, cytotoxic and anticancer activities have been successfully discovered from the endophytic microorganisms. In this research, 54 endophytic fungi and 6 endophytic bacteria were isolated from leaves, stems, flowers and roots of the three plants species of *Rubiaceae* family collected in the biological reserve, UiTM Puncak Alam, Malaysia. The objective of this study is to isolate bioactive metabolites of endophytic microorganisms from *Rubiaceae* plants. The microorganisms were inoculated and fermented according to a standardized procedure. Each culture was extracted using ethyl acetate based on our standard operation procedure. The crude extracts were evaluated for preliminary screening of antimicrobial activity against *Staphylococcus aureus* ATCC 25923, *Enterococcus Faecium* ATCC 51585, *Pseudomonas Aeruginosa* ATCC 27853, *Escherichia coli* ATCC 25922 and *Candida Albicans* ATCC 44831, using the MTT method. Pleasingly, the antimicrobial effects of these crude extracts were slightly lower than standard antibiotics. The minimum inhibitory concentration (MIC) of the crude ethyl acetate extracts ranged from 0.1875 mg/mL to 1.5 mg/mL. The crude extracts were analyzed by high performance liquid chromatography (HPLC). HPLC fractionation followed by retesting of the fraction led to correlate chromatographic peaks with biological activity. Pure compound was subjected to standard spectrometry analyzes and its structure established. Data of compounds will be presented.

Keywords: Antimicrobial, Endophytes, HPLC, IR, LC/MS, NMR, UV.
