

**SCREENING OF PRELIMINARY BIOLOGICAL
ACTIVITIES AND *IN-VITRO* CULTURES
PERESKIA BLEO AND *RENNELLIA ELLIPTICA***

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ABSTRACT

SCREENING OF PRELIMINARY BIOLOGICAL ACTIVITIES AND *IN-VITRO* CULTURES *PERESKIA BLEO* AND *RENNELLIA ELLIPTICA*

Pereskia bleo has been used by the local community of Malaysia to treat diabetes, hypertension, anti-tumor, anti-rheumatic, anti-ulcer and anti-inflammatory, while *Rennellia elliptica* were used to enhance inner strength, post natal treatment and to relief joints pain. Screening of phytochemicals, antibacterial, antifungal and inhibitor for protein phosphatase type 1, MAP kinase and MAP kinase phosphatase were performed to evaluate the medicinal properties of these plants. Bioassay through agar diffusion method shows that moderately polar extracts (MPE) for both plants were biologically active. The MPE of old leaves of *P. bleo* shows the best inhibitory activities against *S. typhi* (23.00 ± 0.50 mm), protein phosphatase type 1 (14.17 ± 1.26 mm), MAPK kinase (33.33 ± 1.44 mm), and MAPK kinase phosphatase (10.50 ± 0.50 mm). The MPE of the leaves of *R. elliptica* shows the largest inhibition on *P. vulgaris* (17.33 ± 0.76 mm), while the MPE of the stems shows the best inhibitory activities against MAPK kinase (16.50 ± 1.32 mm), and MAPK kinase phosphatase (9.33 ± 0.58 mm). *In vitro* seeds germination of *P. bleo* was 100% germination using Murashige and Skoog medium (MS), B5 medium and Vacin and Went medium. Callus induction from the seed of *P. bleo* using MS medium supplemented with 2.5 mg/L 2,4-D and 1.5 mg/L kinetin give the highest callus fresh weight (2.9833 ± 0.1302 g). The root explants of *R. elliptica* formed callus on MS medium supplemented with 0.4 mg/L to 1.0 mg/L 2,4-D. Roots induction from the root-derived callus was accomplished on MS medium supplemented with 2.0 mg/L IBA and 0.2 mg/L BAP.