

P-91**Preliminary Phytochemical Analysis and Cytotoxicity Studies of Clinacanthus Nutans (Sabah Snake Grass)**

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Clinacanthus nutans, or Sabah snake grass (Belalai Gajah), is a small shrub from the family Acanthaceae. It has been used in folk medicine to cure various kinds of ailments such as snake bites, kidney failure and cancer. This study was conducted to investigate the initial phytochemical analysis like total phenolic, flavonoids, proteins and polysaccharides content determined by UV spectrophotometry and in vitro anticancer effect in five leaf extracts namely ethanolic, methanolic, 50% ethanolic, 50% methanolic, and water. The cytotoxic effect was evaluated, by the MTT test, on K562 chronic myeloid leukemia cells, HCT 116 colorectal carcinoma cells, and CCD-18Co normal colon fibroblasts. These extracts did not show significant cytotoxicity at 200 and 100 µg/ml on all tested cell lines. The methanolic extract was further fractionated by flash column chromatography to give 20 fractions, the cytotoxic effect of which was evaluated on HCT 116 cells. Significant cytotoxicity was achieved at 200 and 100 µg/ml in fractions number 3, 4, 14 and 16. The percentage inhibition at 200 µg/ml was 80±1.0% (F3), 34±4.2% (F4), 93±1.0 (F14) and 46±10% (F16). At 100 µg/ml, F14 showed 84±1.1% growth inhibition whereas the other fractions showed <50% inhibition. In conclusion, F14 of the methanolic extract of C. nutans may be considered as anti-colon cancer candidate. The chemical profile and the mechanism of action of this fraction will be the topic of our future investigation.

Keywords: Clinacanthus nutans, Acanthaceae, Phytochemicals, Cytotoxicity.
