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ANTI-OXIDANT AND ANTI-CANCER ACTIVITIES OF *Pseuduvaria macrophylla*

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ABSTRACT

Pseuduvaria macrophylla belongs to the Annonaceae family. This species has never been studied especially on their biological and chemical activities. In this study, antioxidant capacity by DPPH assay and ORAC assay,IC_{50}, TPC, compound analysis using mass spectrophotometry and cytotoxicity test against MCF-7, HT29 and PC-3 cancer cell of *P.macrophylla* bark and leaf crude extracts in methanol and hexane were evaluated. For antioxidant activity, the most active extract was bark methanolic extract with IC_{50} value of 31.9±0.1 µg/mL ($p<0.05$). The methanolic crude extract of *P.macrophylla* inhibited the better proliferation of selected three cancer cell lines in the range (111.70 µg/ml±0.70 - 290.13 µg/ml±6.99) compared to hexane crude extracts. The major detected compounds were α-Cadinol, neophytadiene, palmitic acid, linoleic acid, methyl ester, oleic acid, isopolycerasodoil and isopolycerasodoil methyl ester. Obtained results from antioxidant assays, cytotoxicity test and chemical constituent analysis of *P.macrophylla* demonstrated promising antioxidant and anti-cancer potentials.

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