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Determination of Non-Toxic and Subtoxic Concentrations of Potential Antiviral Natural Anthraquinones

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***SUMMARY*. Anthraquinones-rich extracts of *Heterophyllaea pustulata* Hook f. *(Rubiaceae)* exhibited *in vitro* antiviral activity against Herpes Simplex Virus Type I, from which several anthraquinones (AQs) were isolated and identified. The Maximum Non-Cytotoxic Concentration (MNCC), the subtoxic concentration (SubTC), and the CC50 of each AQ were determined on a mammalian eukaryotic cell line (Vero cells) by means of Neutral Red uptake assay; the cytopathic effect was simultaneously evaluated by optical microscopy. The range of concentrations where each AQ did not exhibit cytotoxicity was established, which is limited by the MNCC: rubiadin 1-methyl ether, damnacanthol and pustuline were found to be markedly less cytotoxic. To the remaining AQs, we could estimate a SubTC (about 10 μg/mL) that assures 80 % cellular viability. Therefore, we determined a concentration range which could be used to evaluate the antiviral effect of each AQ since it ensures the viability of the host cell.**

KEY WORDS: Anthraquinones, Cytotoxicity, *Heterophyllaea pustulata* Hook f., Superoxide anion, Vero cells.

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