**Antitumor promoting and actioxidant activities of anthraquinones isolated from the cell suspension culture of Morinda elliptica**


ABSTRACT

Six anthraquinones (nordamnacanthal, alizarin-1-methyl ether, rubiadin, soranjidiol, lucidin-ɤ-methyl ether and morindone) isolated from the cell suspension culture of Morinda elliptica were assayed for antitumor promoting and antioxidant activities. All compounds exhibited strong antitumor promoting activity at the concentration of 2.0 εg/ml when assayed using the inhibition test of Epstein Barr Virus (EBV) activation on Raji cells. At the concentration of 0.4 εg/ml, only nordamnacanthal exhibited strong antitumor promoting activity with the inhibition rate and the cell viability of 75.0% and 75.8%, respectively, which was stronger than the reference compounds genistein and quercetin. In antioxidant assay using ferric thiocyanate (FTC) method, nordamnacanthal and morindone showed stronger antioxidant activity than Ŭ-tocopherol. However when the compounds were assayed for scavenging activity of the stable 1,1-diphenyl-2-picrylhydrazyl (DPPH) free radicals, only morindone was considered to be active as free radical scavenger with fifty percent inhibition concentration (IC50) of 40.6 εg/ml.



**Keyword:** Antitumor promoting; Antioxidant; Anthraquinones; Cell suspension; Morinda elliptica