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Antioxidant and cytotoxic activities of a decoction prepared from *Adenanthera pavonina* (madatiya) and *Thespesia populnea* (gansuriya)

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The exploitation of plants for their medicinal potential and the phenomenon "stem to pill" has been a topic of much discussion. However, a very few traditional decoctions are subject to a comprehensive analysis. A decoction comprising *Adenanthera pavonina* L. and *Thespesia populnea* L is used to treat cancer by traditional physicians in Sri Lanka. Potential antioxidant and cytotoxic properties of the decoction were investigated in this study.

Lyophilized extract of the decoction was used to study the antioxidant activity and cytotoxicity. Antioxidant activity of the decoction was investigated using 1, 1-diphenyl-2-picrylhydrazyl (DPPH) radical scavenging assay and nitric oxide radical scavenging assay. Larynx carcinoma (*Hep-2*) tumor cells were treated for 24 hours with different concentrations of the decoction at 37°C. 3-(4, 5-Dimethylthiazol-2-yl)-2, 5-diphenyl tetrazolium bromide (MTT) assay was used to evaluate the antiproliferative activity of the decoction.

The mean (\pm SD) values for EC₅₀ were 7.24 (\pm 0.495) and 14.02 (\pm 0.66) mg dm⁻³ for DPPH and nitric oxide radical scavenging activity respectively. The Mean (\pm SD) value for EC50 was 140.69 (\pm 12.57) mg dm⁻³ for MTT assay. These results provide the chemo preventive and therapeutic potential of the decoction containing *Adenanthera pavonina* L. and *Thespesia populnea* L.

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