

## Anti-inflammatory and Antioxidant Activity of *Heliotropium indicum* Linn. Used for Cancer Patients Treatment

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**Abstract :** Inflammation and oxidative stress work together to produce symptoms in cancer patients. The whole part of it is used as a preparation to treat cancer patients in Khampramong temple which has been a place of treatment and palliative care for cancer patients since 2005. Thus, the objective of this study was to investigate anti-inflammatory and antioxidant activities of *Heliotropium indicum* extracts. Dried plant materials were extracted in a similar manner to those practiced by the Khampramong Temple i.e. maceration in 95% ethanol and boiling in water. For anti-inflammation activity, both extracts were tested for suppression of nitric oxide (NO) production in LPS-induced RAW 264.7 cells. They were also tested for antioxidant activity by DPPH radical scavenging assay. This study found that the ethanolic extract of *Heliotropium indicum* exhibited higher inhibitory activity of NO release than Indomethacin as a positive control (IC<sub>50</sub> value of 24.17±2.12 and 34.67±6.23 µg/mL, respectively). For DPPH radical scavenging assay, the ethanolic extract also exhibited antioxidant activity but less than BHT as a antioxidant compound (EC<sub>50</sub> values = 28.91±4.26 and 13.08±0.29 µg/mL, respectively). In contrast, its water extract had no inhibitory activity on NO release (IC<sub>50</sub> > 100 µg/mL) and no inhibitory activity on DPPH radicals (EC<sub>50</sub> values > 100 µg/mL). The results showed correlation between anti-inflammation and antioxidant activity and these results also support using this plant to treat cancer patients.

**Keywords :** *Heliotropium indicum*, RAW 264.7, DPPH, Khampramong Temple

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