Antioxidant and Antiproliferative Activities of *Tiliacora triandra* Leaf Extract Against Melanoma Cells

Aman Tedasen
Walailak University, Thai Buri, Thailand

Bantita Sutawi
Walailak University, Thai Buri, Thailand

Passakorn Poolbua *
Walailak University, Thai Buri, Thailand

Suda Sanasee
Walailak University, Thai Buri, Thailand

Atthaphong Phongphithakchai
Walailak University, Thai Buri, Thailand

Moragot Chatatikun
Walailak University, Thai Buri, Thailand

Abstract

Melanoma is among the most aggressive and treatment-resistant forms of skin cancer, necessitating the exploration of novel therapeutic strategies. This study investigated the antioxidant potential and antiproliferative effects of *Tiliacora triandra* leaf extract on B16F10 melanoma cells. The ethanolic extract showed high total phenolic (7.52 ± 0.14 mg GAE/g dry extract) and flavonoid (7.50 ± 0.44 mg QE/g g dry extract) contents. In antioxidant assays, the water extract demonstrated SC_{50} values of 319.30 ± 10.80 µg/mL (DPPH) and 134.63 ± 6.53 µg/mL (ABTS), compared to 3.72 ± 0.14 µg/mL and 2.53 ± 0.01 µg/mL for ascorbic acid, respectively. Cytotoxicity assessment using the MTT assay revealed a dose-dependent reduction in B16F10 cell viability, with IC_{50} values of 198.50 ± 1.00 µg/mL at 24 hours and 133.53 ± 17.80 µg/mL at 48 hours. These findings suggest that *Tiliacora triandra* leaf extract exhibits significant antioxidant and anticancer activities, supporting its potential as a promising natural agent for melanoma therapy.

Keywords

Melanoma, antioxidant activity, melanin, *Tiliacora triandra*.