

INHIBITOR EFFECT OF FLAVONOID FROM *BLUMEA BALSAMIFERA* (L.) DC. LEAVES EXTRACT ON MELANIN SYNTHESIS IN CULTURED B16F10 CELL LINE AND ZEBRAFISH

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ABSTRACT

Tyrosinase is involved in melanin biosynthesis and the abnormal accumulation of melanin pigments leading to hyperpigmentation disorders that can be treated with depigmenting agents. EA fraction isolated from *Blumea balsamifera* (L.) DC leaves demonstrate that 200 mM of EA apparently attenuates 41.8% melanin content of human normal melanocytes without significant cell toxicity. Moreover, the zebrafish *in vivo* assay reveals that EA effectively reduces melanogenesis with no adverse side effects. These results evident that EA isolated from *Blumea balsamifera* (L.) DC leaves is a promising candidate in developing pharmacological and cosmetic agents of great potency in skin-whitening.

Keywords: *Blumea balsamifera*, ethyl acetate fraction, B16F10 melanoma, skin-whitening.