〈原　著〉

インドネシア産生薬ルムプヤンのチロシナーゼ産生抑制効果

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Inhibitory Effects of Lempuyang on Melanogenesis

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Abstract

We have evaluated a number of plant extracts for ability to inhibit melanogenesis of B16 mouse melanoma. Extract of Lempuyang, which is used as a traditional medicine in Indonesia, showed a significant inhibitory effect. Lempuyang belongs to Zingiberaceae, and Lempuyang extract was prepared by reflux with ethanol solution. The extract decreased the melanin content and tyrosinase activity of B16 mouse melanoma in a dose-dependent manner. In a test for direct inhibition of tyrosinase activity, addition of Lempuyang extract caused no significant inhibition of DOPA oxidase activity of mushroom tyrosinase. Immunoblot analysis revealed that the protein amounts of tyrosinase and TRP-1 were decreased by Lempuyang extract. Northern blot analysis revealed that Lempuyang extract reduced the level of tyrosinase mRNA. These results suggest that the inhibitory effect of Lempuyang extract on melanogenesis is due to inhibition of the expression of tyrosinase gene.

Key words: melanin, tyrosinase, TRP-1, Lempuyang.