

〈原 著〉

B 16 マウスメラノーマ培養細胞の樹状突起形成に及ぼす メラニン生成抑制剤の影響

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Inhibitory Effects of Melanogenic Inhibitors on Dendricity of Cultured B16 Mouse Melanoma Cells

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Abstract

Effects of the melanogenic inhibitors on dendricity were examined using B16 mouse melanoma cells culture. Melanogenesis and dendricity of the cells were inhibited by following melanogenic inhibitors, arbutin (Arb), kojic acid (KA), L-ascorbic acid phosphate magnesium (Asc-PMg) and licorice extract P-T (40) (P-T (40)), in dose-depending manner without cytotoxic effect. The potentials were in the order P-T (40) > KA > Arb > Asc-PMg. Tyrosinase activity was also blocked by Arb, KA, P-T (40) and L-ascorbic acid, employed in alternative to Asc-PMg. Other tyrosinase inhibitors, mulberry bark (Souhakuhi) extract, *p*-coumaric acid and ferulic acid inhibited the melanogenesis and dendricity. Based on the inhibitory activities for melanogenesis and dendricity, all the inhibitors were classified two groups. One group had the higher inhibitory activity for melanogenesis than the inhibition of dendricity and another group showed the similar inhibitory activities for them. Furthermore there was a good correlation between both inhibitory activities in each group. It was indicated that regulatory mechanisms of melanogenesis and dendricity were closely associated each other in the cells.

Key words: melanogenesis, dendricity, tyrosinase, B16 mouse melanoma cells, melanogenic inhibitor.