Inhibition of C2-ceramide induced contraction in cat esophageal smooth muscle cell by newly synthesized Ceramide analogues

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It has been shown that C2-ceramide (C2), short chain ceramide, plays a role in mediating contraction of cat esophageal smooth muscle cells. We examined the effect of newly synthesized ceramide analogues on the C2-ceramide induced contraction in esophageal smooth muscle cells isolated with collagenase.
C2-ceramide produced contraction of smooth muscle cells in a dose dependent manner. CY 3523, CY3525, or CY 3723 (a ceramide analogue) inhibited C2-ceramide induced contraction in a dose dependent manner, which inhibition produced maximally at 10^{-5} M of each analogue. CY 3523 showed the 35~40% inhibition, and CY3525, CY3723 showed 25~35% inhibition. The inhibition of C2-ceramide induced contraction by ceramide analogues was recovered by treatment with PMA (100 nmol, PKC activator) for each analogue. These result suggest that ceramide analogues can inhibit C2-ceramide induced contraction via PKC-dependent pathway.

[PA1-17] [10/18/2002 (Fri) 09:30 - 12:30 / Hall C]

Inhibitory Effects of 1,3-Selenazol-4-one Derivatives on Mushroom Tyrosinase

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This study reports depigmenting potency of 1,3-selenazol-4-one derivatives, which would be based upon the finding of direct inhibition to mushroom tyrosinase. 1,3-Selenazol-4-one derivatives exhibited inhibitory effect on dopa oxidase activity of mushroom tyrosinase. In this study, inhibitory effects of six kinds of 1,3-selenazol-4-one derivatives (3a, 3c, 3d, 3e, 3g and 3i) on mushroom tyrosinase were investigated. Compounds at a concentration of 500 mM exhibited 33.4 - 62.1 % of inhibition on dopa oxidase activity of mushroom tyrosinase. Their inhibitory effects were higher than that of kojic acid (31.7 %), a well known tyrosinase inhibitor. 2-(4-Methylphenyl)-1,3-selenazol-4-one (3a) exhibited the strongest inhibitory effect among them dose-dependently and in competitive inhibition manner.

[PA1-18] [10/18/2002 (Fri) 09:30 - 12:30 / Hall C]

Inhibitory effects of new quinone compounds on eNOS activity in rat aorta and nNOS activity in rat brain

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Nitric oxide (NO) has been shown to play an important role in the regulation of vascular tone, platelet function, neurotransmission, and immune function. NO is synthesized from the L-arginine by NO synthase (NOS). Three distinct isoforms of NOS have been identified: calcium/calmodulin-dependent