explain why capsaicin mimics 12-(S)-HPETE in activating the channel. Our modeling studies show 12-(S)-HPETE is the most structurally similar to capsaicin among them. As a part of our program directed toward development of the VR1 agonist and antagonist, we initially investigated possible synthetic strategies for eicosanoids. Particularly, the asymmetric synthesis of 12-(R) and (S)-HETE has been accomplished in our laboratory. Our synthesis illustrates a general and efficient synthetic scheme to HETE and analogues thereof.

[OD-4] [10/20/2000 (Fri) 10:45 - 11:00 / Hall C]

Antioxidative triterpenoidal saponins from the fruits of Ternstroemia japonica Thunberg

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Ternstroemia japonica THUNBERG has been used for heartache in Koean folk medicine. In our chemical study of this plant, an antioxidant activity was detected in the saponin fraction of the fruits. Five new triterpenoidal saponins were isolated, and their structures were elucidated by chemical and spectral evidences as follows: 1, Primulagenin A 3-[β-D-glucopyranosyl(1→2)][α-L-rhamnopyranosyl(1→2)-β-D-galactopyranosyl(1→3)]-β-D-glucopyranosiduronic acid, 2, Camelliagenin A 3-[β-D-glucopyranosyl(1→2)][α-L-rhamnopyranosyl(1→2)-β-D-galactopyranosyl(1→3)]-β-D-glucopyranosiduronic acid, 3, A_1-barringenol 3-[β-D-glucopyranosyl(1→2)][α-L-rhamnopyranosyl(1→2)-β-D-galactopyranosyl(1→3)]-β-D-glucopyranosiduronic acid, 4, 16-Acetyl camelliagenin A 3-[β-D-glucopyranosyl(1→2)][α-L-rhamnopyranosyl(1→2)-β-D-galactopyranosyl(1→3)]-β-D-glucopyranosiduronic acid, and 5, 3β, 16α, 22α, 28-Tetrahydroxy-olean-12-ene 3-[β-D-glucopyranosyl(1→2)][α-L-rhamnopyranosyl(1→2)-β-D-galactopyranosyl(1→3)]-β-D-glucopyranosiduronic acid.

[OD-5] [10/20/2000 (Fri) 11:00 - 11:15 / Hall C]

Novel Resveratrol Tetramers from Vatica diospyroides

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A novel reveratrol tetramer, vatdiospyroidol, was isolated as a cytotoxic constituent by bioassay-guided chromatographic fractionation, monitored by the KB (human oral epidermoid carcinoma, EC50 1.0 μg/mL) cell line from the ethyl acetate extract of the stems of Vatica diospyroides Sym. (subfamily, Dipterocarpoideae; family, Dipterocarpaceae). The compound also showed cytotoxic activities against the Col2 (human colon, EC50 1.9 μg/mL) and BC1 (human breast, EC50 3.8 μg/mL) cancer cell lines. Another novel resveratrol teramer, vaticaphenol A, was found to be an inactive constituent, although it was derived from a cytotoxic fraction. In addition, the knwon compounds bergenin, betulin, betulinic acid, mangiferonic acid, and (E)-resveratrol 3-O-β-glucoside were obtained. They were found to be non-cytotoxic substances when evaluated against a small panel of human cancer cells. (E)-Resveratrol 3-O-β-glucoside is the first resveratrol monomer to have been isolated from a plant in the family Dipterocarpaceae. Structures of resveratrol teramers were elucidated by spectral analysis, including 1D and 2D NMR experiments.

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