[PD1-23] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Design, Synthesis, And In Vitro Evaluation of Apio Analogs of Neplanocin A and Aristeromycin

Lee Jeong Ah°, Yoo Byul Nae, Moon Hyung Ryong, Lee Kang Man, Jeong Lak Shin

Laboratory of Medicinal Chemistry, College of Pharmacy, Ewha Womans University, 11-1 Seodaemun-ku, Daehyun-dong, Seoul, 120-750, South Korea

Apio nucleosides whose 4'-hydroxymethyl group moves to 3'-position exhibit interesting biological activity such as antitumor or antiviral activity. On the other hand, neplanocin A and aristeromycin are the representative of the carbocyclic nucleosides and have been recognized as potent inhibitors of S-adenosylhomocysteine hydrolase. Based on these findings, it was of great interest to design apio analogues of neplanocin A and aristeromycin. These nucleosides combine the characteristics of apio nucleosides and carbocyclic nucleosides, neplanocin A and aristeromycin. For the synthesis of the apio carbocyclic analogues, D-ribose was converted to the key intermediate, D-apio cyclopentenol or D-apio cyclopentanol via Grignard reaction, oxidative cleavage, and hydroxymethylation as key steps. The glycosyl donors, D-apio cyclopentenol or D-apio cyclopentanol was condensed with adenine anion to give the final nucleoside after the removal of the protecting group. The final apio neplanocin A and aristeromycin were assayed against S-adenosylhomocysteine hydrolase and found to be much less potent than parent nucleosides. Interesting chemistry encountered during the synthesis and biological activity will be presented in the meeting.

[PD1-24] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Synthesis of Quinolinones for Novel Flavonoid Derivatives

Park MyungSook°, Park HaeSun, Yoon MyungSun, Kim NanYoung, Lee Jaeln*

College of Pharmacy, DukSung Women's University

We report the synthesis of key intermediates for the development novel flavonoid derivatives with potential antiinflammatory activity and propose a mechanism of the one-pot reaction. The various amines (1) for this work were commercially available. Secondary amines (2) were formed by nucleophilic attraction using ethyl benzoylacetate. The C-N bond formation proceeded at refluxing in toluene with catalytic amount of p-toluenesulfonic acid and a removal of water was important in this reaction. Compounds 2 were converted to quinolinones (3) in xylene using Dean-Stark apparatus. Synthetic process from amine (1) to quinolinone (3) could be carried out in one-pot without isolation of intermediate (2), 3 were generated during the proloned reaction time. One-pot condensation with dehydration could be convenient synthetic method, gives quinolinones.

[PD1-25] [04/18/2003 (Fri) 13:30 - 16:30 / Hall P]

Chain-branched Acyclic Phenethylthiocarbamates as Vanilloid Receptor Antagonists

Kim Hee-Doo°, Yoon JungWha, Choi HyeYoung, Lee Hyun Joo, Ryu Chong Hyun, Park Young Ho, Suh Young-ger, Oh Uhtaek, Park Hyeung-guen

Sookmyung Women's University; AmorePacific Co.; Seoul National University