

7-Acylamino-3-(isoxazolymethylthio)-3-cephem-4-carboxylic acids or their pharmacologically acceptable salts were synthesized and their antibacterial activities against Gram-positive and Gram-negative were inspected. We discovered that their analogs exhibited a wide spectrum against Gram(+) and Gram(-) including MRSA. We will describe the relationships between the structure and activity of these novel Cephalosporins with 3-isoxazolymethylthio Derivatives.

[PD1-6] [10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]

The Development of New Carbacephem Antibiotics

Pyun SJ, Kim YH, Lee YS, Ham WH

College of Pharmacy, Sungkyunkwan University, Suwon 440-746

Carbacephem is one of β -lactam antibiotics having a broad spectrum of antibacterial activity. So numerous methods for constructing carbacephems have been reported. In this study, we describe a new route to the synthesis of trans-carbacephem moiety and derivatives. The total synthesis of trans-carbacephem was starting from trans-oxazoline. Key stages in the strategy involved (i) the use of hydrogenation gave a cleavage of trans-oxazoline (ii) formation of β -lactam ring was prepared using the Mitsunobu reaction (iii) six-membered ring of carbacephem was prepared by a Dieckmann-condensation.

[PD1-7] [10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]

Synthesis and antiviral activity of novel exomethylene cyclopropyl nucleosides

Kwak EY⁰¹, Choi BG¹, Hong JH², Lee CK³

¹College of Pharmacy Chonnam National University, Kwangju 500-757, ²Department of Medicinal Chemistry, College of Pharmacy Ewha Womans Univ., Seoul 120-750, ³Korea Res. Institute of Chem. Technology, Taejon Korea.

Some novel exomethylene cyclopropyl nucleosides were synthesized as analogues of Synadenol derivatives to find potent antiviral agents. The intermediate, Feist's acid was prepared from α -ethy acetoacetate by three steps. The key cyclopropyl compound was obtained via esterification, reduction, and the partial protection by using TBDPS-Cl, bulky protecting group which was activated by tosylation. Its condensation with pyrimidine and purine bases in the presence of potassium carbonate and a crown compound and its deprotection by using *n*-Bu₄NF gave their corresponding cyclopropyl nucleosides. All the synthesized compounds were evaluated for antiviral activity. However, none of them showed any antiviral activity against HSV-1, HSV-2, HCMV, HIV-1, HIV-2, and HBV up to 100 μ M.

[PD1-8] [10/20/2000 (Fri) 11:30 - 12:30 / [Hall B]]

Synthesis and Biological Properties of 7H-Pyrazolo[3,4-d]pyrimidine-Derived Antifolates As Antitumor Agents

Jahng, Y, Park, JG, Yu JW, Kim, HH, Yang, SI.