lipopolysaccharide (LPS). The results showed that most of compounds except 2',3'-dihydrobyakangelicin, reduced form of furan double bond in byakangelicin, inhibited weakly or moderately NO production. But, in case of the PGE_2 production, imperatorin, isoimperatorin, phellopterin, isooxypeucedanin and 2',3'-dihydrobyakangelicin exhibited potent inhibition of PGE2 production. Western-blot analysis revealed that 2',3'-dihydrobyakangelicin inhibited the expression of the inducible forms of cyclooxygenase (COX-2) protein in concentration dependent manner.

[PD1-26] [04/20/2001 (Fri) 13:30 - 14:30 / Hall 4]

New Cephalosporin Antibiotics with (5-Substituted-Isoxazol-3-yl)-3-Pyridiniummethyl Derivatives.

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The new cephalosporins with 3-isoxazolylpyridinium moiety exhibited well-balanced broad spectrum against Gram-positive and Gram-negative bacteria.
We found a moderate activity against Gram-positive and Gram-negative bacteria for simplified compound (1a), with unsubstituted isoxazole ring. The introduction of amino group (1b) beared fruitful *in improving the antibacterial activity against* Gram-positive and Gram-negative bacteria including P. aeruginosa. Activity of 1b exhibited similar to that of cefpirome.
The effect of substituents of heterocyclic ring to influence antibacterial activity against Gram-positive and Gram-negative bacteria should provide an important utility to the antibiotics arena

[PD1-27] [04/20/2001 (Fri) 13:30 - 14:30 / Hall 4]

New Cephalosporin Antibiotics with (5-Substituted-4,5-Dihydroisoxazol-3-yl)-1-Methyl-1,2,5,6-Tetrahydro-3-Pyridiniummethyl Derivatives

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The various (5-substituted-4,5-dihydroisoxazol-3-yl)-1-methyl-1,2,5,6-tetrahydro-3-pyridine derivatives possessing hydroxy, methyl hydroxy, alkoxy, methylthioether, thiophenyl group at the 5 position on 4,5-dihydroisoxazole ring were synthesized. These (5-substituted-4,5-dihydroisoxazol-3-yl)-1-methyl-1,2,5,6-tetrahydro-3-pyridine derivatives were coupled with cephalosporin moiety to produce new series of cephalosporin antibiotic and their antibacterial activity was inspected.
On the selected functionality of these SAR, 7-[(Z)-2-(2-amino-1,3-thiazol-4-yl)-2-(methoxyimino) acetyl]amino-3-[5-hydroxy-4,5-dihydroisoxazol-3-yl-(1-methyl-1,2,5,6-tetrahydro-3-pyridinio) methyl]-ceph-3-em-4-carboxylate can be regarded as the best compounds, when compared the others, showing a better balances between Gram- positive and Gram-negative bacteria. 4,5-dihydroisoxazol-3-yl-(1-methyl-1,2,5,6-tetrahydro-3-pyridiniummethyl cephalosporin with thiopheny substituents beared fruitful in improving the activity against Gram-positive bacteria.

[PD1-28] [04/20/2001 (Fri) 13:30 - 14:30 / Hall 4]

Simulation for Effect of p3 Segment on Aggregation of Amyloid Peptide Using Cellular Automata