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Type 2 diabetes is commonly called non-insulin-dependent diabete mellitus(NIDDM).
NIDDM is characterized by diminished insulin secretion relative to serum glucose level and by peripheral insulin resistance, both of which can be exacerbated by chronic hyperglycemia and improved by euglycemia.
Rosiglitazone, pioglitazone, and troglitazone, a new class of antihyperglycemic agents, reduce insulin resistance or potentiate insulin action in genetically diabetic animals.
We are in the process of synthesizing troglitazone type of compound in which vitamin E moiety was replaced with catechin.

[PD1-9] [04/21/2000 (Fri) 14:50 - 15:50 / [1st Fl, Bldg 3]]

Synthesis of Asiatic Acid Derivatives and their Hepatoprotective Activity

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Hepatopathia has become one of the main social problems in the world. But the considerably effective hepatopreventive agents or drugs for the treatment of hepatic disease have not been introduced. Recently it was reported that some triterpenoids have been extensively studied as hepatopreventive agents. Asiatic acid is one of the triterpenoid isolated from Centella asiatica whose extract was used as a wound healing agent. In our research program for the discovery and development of novel hepatopreventive agents, a series of asiatic acid derivatives was synthesized and evaluated hepatopreventive activities against CCl_4 or galactosamine-induced hepatotoxicity. For the modification of asiatic acid, structure of A or B ring in asiatic acid was modified. Some of the prepared compounds showed better hepatopreventive activity than silybin against CCl_4 or galactosamine-induced hepatotoxicity. The structure-activity relationships of prepared compounds would be further discussed.

[PD1-10] [04/21/2000 (Fri) 14:50 - 15:50 / [1st Fl, Bldg 3]]

Synthesis and Structure Activity Relationships of Quaternary Ammonium Cephalosporins with 3-triazolylpyridinium Derivatives.

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The various 3-(triazol-3-yl)pyridine derivatives possessing hydrogen, methyl, thiomethyl, hydroxy, amino group at the C-5 position and hydrogen, methyl, hydroxyethyl group at the C-1 position on triazole ring were synthesized. These novel substitued 3-(triazol-3-yl)pyridine derivatives were coupled with cephalosporin moiety to produce a new series of cephalosporin antibiotic and their antibacterial activity against Gram-positive and Gram-negative was inspected. We discovered that their analogs display comparable antibacterial activity against Gram-positive and Gram-negative bacteria.
We will describe the relationship between the structure and activity of Quaternary Ammonium Cephalosporins with 3-triazolylpyridinium Derivatives tested.