[PD1-11] [04/21/2000 (Fri) 14:50 - 15:50 / [1st Fl, Bldg 3]]

Synthesis of 1,4-Dioxane Ring-fused Quinazoline Derivatives as an EGFR Tyrosine Kinase Inhibitor

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Protein tyrosine kinases (PTKs) catalyze the selective transfer of phosphate group from ATP to a tyrosine hydroxyl residue of a substrate protein. Tyrosine phosphorylation is critical event in growth factor mediated signal transduction and PTKs are key components of this process. The aberrant overexpression of receptor PTKs or their cognate ligands has been implicated in the pathogenesis of proliferative diseases. Therefore, the inhibition of tyrosine kinase-mediated signal transduction pathways represents a therapeutic approach to the intervention of proliferative diseases such as cancer. In this study, we synthesized a novel series of 1,4-dioxane ring-fused quinazoline derivatives and tested on the EGFR tyrosine kinase activity in vitro.

[PD1-12] [04/21/2000 (Fri) 14:50 - 15:50 / [1st Fl, Bldg 3]]

Synthesis of Novel 1,2-Substituted Pyrrolidine Derivatives for COX-2 Inhibitors

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The recent discovery of the inducible form of cyclooxygenase (COX-2) that is associated with inflammation has provided the pharmaceutical industry with a target for development of nonsteroidal antiinflammatory drugs (NSAIDs). This study reports on design and synthesis of novel selective cyclooxygenase-2 inhibitors with greatly reduced gastrointestinal or renal toxicity. The 5-membered ring heterocycle such as thiazole, thiadiazole, pyrrole, oxazole, isoxazole, imidazole, pyrazole, furan, furanone were replaced on the thiophene ring of Dup 697. A series of pyrrolidine-based inhibitor were designed and synthesized in this study. The N, 4-alkoxy- 1-(4-methylphenylsulfonyl)- 2-phenyl carboxamidyl- L-prolines were synthesized through N-tosylation, esterification, O-alkylation, base-hydrolysis, amination from 4-hydroxy-L-proline.

[PD1-13] [04/21/2000 (Fri) 14:50 - 15:50 / [1st Fl, Bldg 3]]

Synthesis and β-lactamase inhibitory activities of 2-conjugated alkenyl penam sulfones II

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The β-lactamases cause the bacterial drug resistance and the β-lactamase inhibitors show high efficacy of synergistic effect in the combination of β-lactam group antibiotics. As a search for new broad-spectrum β-lactamase inhibitors, we prepared 2β-conjugated alkenyl penam sulfones which contains amide, aldehyde, or cyanide functional group, and their activities against β-lactamase were