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Oxygen radicals are produced in many pathophysiologic states whether the event is a causal factor of illness or is a result of their progression. Oxygen radicals including superoxide anions, hydrogen peroxide are thought to be involved in a number of type of acute, and chronic pathologic condition in the brain and neural tissue. So the antioxidants have recently received much attention as therapeutic agent for the treatment of neurodegenerative disease.
In this study, we describe synthesis of a series of chromenone derivatives as antioxidant agents. The target compounds are designed to include the structural feature of caffeic acid, flavonoid, and tocopherol known as antioxidants.

[PD1-39] [10/17/2002 (Thr) 09:30 - 12:30 / Hall C]

Synthesis and Antifungal Activities of 2,5-Disubstituted-6-Arylamino-4,7-benzimidazolediones

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2,5-Disubstituted-6-arylamino-4,7-benzimidazolediones were synthesized and tested for in vitro antifungal activities against pathogenic fungi. The 2-aryl-6-arylamino-5-chloro-4,7-benzimidazolediones were prepared by nucleophilic substitution on 2-Aryl-5,6-dichloro-4,7-benzimidazolediones with appropriate arylamines in good yields. The synthesized 4,7-benzimidazolediones were tested in vitro for their growth inhibitory activities against pathogenic fungi by the standard method. The MIC values were determined by comparison to flucytosine as a fungicidal standard agent. The most active potential among the 4,7-benzimidazoledione series was found for 6-arylamino-2-(2-pyridyl)-4,7-benzimidazolediones, which showed generally good activities against all tested Candida species and A. niger.

[PD1-40] [10/17/2002 (Thr) 09:30 - 12:30 / Hall C]

Synthesis and evaluation of antifungal activities of 5-arylamino-6-chloro-4,7-dioxoindazoles

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5-Arylamino-6-chloro-4,7-dioxoindazoles (DZs) were newly synthesized for the evaluation of antifungal activities. The compounds DZs were prepared by regioselective nucleophilic substitution of 5,6-dichloro-4,7-dioxoindazoles with appropriate arylamines in high yield. DZs were tested for their growth inhibitory activities against Candida species and Aspergillus niger. The MIC values were determined by the two-fold dilution method. In general, DZs showed in vitro antifungal activities. Among the tested compounds, DZ1, 3, 6, 7and 12 showed potent antifungal activities against Candida species and Aspergillus niger. DZ7 was the most effective in preventing the growth of Candida species.

[PD1-41] [10/17/2002 (Thr) 09:30 - 12:30 / Hall C]

Synthesis of N-arylalkylbenzimidazolones(thiones) and 3-arylalkyl-3,4-dihydro-1H-quinazolinones (thinones) as conformatonally restricted PETT analogs for inhibition of HIV-1 reverse transcriptase

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