URN etd-0407109-183723-1952
Author Su Yu Sheng
Author's Email Address No Public.
Statistics This thesis had been viewed 34 times. Download 0 times.
Department
Year 2005
Semester 1
Degree Master
Type of Document Master's Thesis
Language zh-TW.Big5 Chinese
Title Studies on the Syntheses and Biological evalution of Bioorganic and medicinal compounds
1. The study of Aromatic and Hetercylic substituted thiazolines
2. The study of cytosine and uracil derivatives
Date of Defense 0000-00-00
Page Count 80

Keyword
Aromatic and Hetercylic substituted thiazolines
cytosine
uracil

Abstract
This report addresses the syntheses of novel bioorganic compounds with pharmacological activity. Base on the structural difference of synthesized compounds, the text is divided into two major parts: In the first part, the aromatic ahdehyde thiosemicarbazones were used as starting materials which reacted with ethyl 2-chloroacetoacetate in ethyl alcohol to give aromatic substituted thiazolines. The pharmacological properties of all the synthesized compounds were studied and discussed separately by three sections: (A) study on the syntheses of aromatic substituted thiazolines; (B) evaluation of antioxidant activity－scavenging effect on DPPH radical; (C) evaluation of antioxidant activity－ABTS method. The experimental result indicated that the synthesized aromatic substituted thiazolines exhibited the potent DPPH radical scavenging activity, comparable to that of vitamine E. In the second part, the syntheses of 5-fluorouracil, cytosine and 5-fluorocytosine derivatives were discussed. They were produced by the reaction of special alkyl halides with corresponding starting materials. Besides, the double functionalized drugs of 5-fluorouracil, cytosine and 5-fluorocytosine were also synthesized. They were obtained by the reaction of corresponding starting materials and special reagents with double functional groups to increase the released amount of 5-fluorouracil, cytosine and 5-fluorocytosine. Combination therapy of these double functionalized drugs can simultaneously release 5-FU and DPD inhibitor to attain high concentration of 5-FU in tumor and without an increase in other normal tissues. The pharmacological properties of all the synthesized compounds were studied and could be discussed separately by two sections: (A) the syntheses of 5-fluorouracil, cytosine and 5-fluorocytosine derivatives, and their double functionalized drugs; (B)biological evaluation: the antitumor activity of the synthesized compounds have been tested against Human cervical epithelioid carcinoma and fibrosarcoma cells by MTT assay. The testing result showed that both the single link derivatives and double functionalized drug derivatives have better anticancer activity than that of raw materials.
Advisory Committee - advisor

Files No Any Full Text File.
Date of Submission 2006-01-20