

I 抗病毒藥材之研究 (2) — 稜果蒲桃抑制 EBV DNA Polymerase

之活性成分 II 中藥材品質管制之研究 (4) — 龍膽指標成分

Gentiopicroside

The Study of Antiviral Effect on Folk Medicines (2) The Study of The Quality Control on Chinese Medicines (4)

中文摘要

自然界中含 polyphenols 化合物之抗病毒研究，近年來頗受研究界之重視。臺灣位居亞熱帶，植物資源豐富，本研究化學方法選擇含 polyphenols 之臺灣民間藥材為研究對象，利用與鼻咽癌有關聯之 EBVDNA polymerase 為體外活性測定之指標，篩選抗病毒藥材。具有活性之藥材之一稜果蒲桃(*Eugenia uniflora* Linn.)，大量採集、抽取並進一步利用分離 polyphenols 之方法，例如：管柱層析法 (column chromatography)、高效能液相層析法(HPLC)等分離植物之成分。經純化後利用各種光譜 (例如：FAB-MS、UV spectra、IR spectra、¹H-NMR spectra、¹³C-NMR spectra、CD spectra 等)決定其化學構造。由活性劃分部分離出四種結晶性成分，其中 gallicocatechin、myricitrin 為抑制 EBV DNA polymerase 之主成分。其作用機轉，則擬以細胞 (例如：Raji cells) 作進一步探討。本研究之第二部分則利用高效能液相層析法 (HPLC) 定量龍膽藥材中之健胃有效主成分 — gentiopicroside，進行龍膽藥材含量最佳抽出率之探討、市售九種龍膽藥材之含量評價及含龍膽方劑中 gentiopicroside 之含量分析，結果以 100 倍體積之 50 % MeOH 於超音波中振盪 50 分鐘可得最佳之抽出率。並發現市售龍膽藥材中之含量從 1.30% 到 5.86% 不等。

英文摘要

Recently, the polyphenol compounds contained in natural plants which were researched in antiviral to consider important. Taiwan is located in the subtropical zone and there are abundant plants in Taiwan. Using chemical methods to screen Taiwan folk medicines which contained polyphenols and anti-EBV (Epstein-Barr virus) DNA polymerase activity in vitro which is associated with nasopharyngeal carcinoma (NPC). *Eugenia uniflora* Linn. is one of the active folk medicines. By applied of various chromatographic and spectroscopic techniques to the isolation, analysis and structure determination of these compounds, such as: column chromatography、high-performance liquid chromatography (HPLC)、FAB-MS、UV spectra、IR spectra、¹H-NMR spectra、¹³C-NMR spectra、CD spectra and so on. There were four crystal compounds, which were isolated from ethyl acetate fraction of the *Eugenia uniflora*, gallicocatechin and myricitrin, are testing for anti-EBV DNA

poly- merase activity. In addition the mechanism of activity was used the cell lines (eg: Raji cells) to do further study. Another research is using HPLC method to quantity of gentio- picoside which is the conducive component to the health of stomach. The best yield of the Long-Dan in different extraction conditon was investigated. In addition, in various drug markets and the various contents of gentiopicoside in the Chinese medicinal prescriptions containing Long-Dan were also performed. The results were found 100 volume of Long-Dan(W/V) of 50% methanol in 50 minutes of sonication could produce the best yield. The contents of gentiopicoside in various drug markets were found in range from 1.30% to 5.86 % .