• 計畫中文名稱	以去活化蛋白激酵素及抗氧化酵素系統篩選模式評估龍膽瀉肝與當歸龍薈丸之療效		
• 計畫英文名稱	Evaluate the Potential Effects of the Decoction of Gentianae and Bolus of Angelicae sinensis and Gentianae by Using the Screening Model on the Inactivated Protein Kinase and Anti-Oxidative Enzymes System		
• 系統編號	PG8906-0030	• 研究性質	基礎研究
• 計畫編號	CCMP89-RD-112	• 研究方式	委託研究
• 主管機關	行政院衛生署	• 研究期間	8905 ~ 8910
• 執行機構	私立臺北醫學院		
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• 研究領域	藥學, 臨床醫學類		
• 研究人員	許秀蘊,李明亭		
• 中文關鍵字	龍膽瀉肝湯；當歸龍薈丸；蛋白激酵素；抗氧化酵素		
• 英文關鍵字	Decoction of Gentianae；Bolus of Angelicae Sinensis and Gentianae；Protein Tyrosine Kinase；Anti-oxidative Enzyme System		
• 中文摘要	中國傳統藥方龍膽瀉肝湯及當歸龍薈丸均具清熱瀉肝之作用，以治肝膽實火上炎之証。但當歸龍薈丸爲大寒大苦之品，非實火壯體，不可輕易嚐試，而龍膽瀉肝湯則作用較爲緩和。因此擬從方劑上配方之不同、成分上之差異，就幾種篩選試驗來分辨其差異性，並建立篩選模式。 肝癌爲台灣最盛行的惡性腫瘤，而其中以 B 型肝炎病毒(hepatitis B virus, HBV)感染爲眾所皆知的危險因子。利用細胞遺傳學和染色體 in situ hybridization 的方法，由染色體變化和 B 型肝炎病毒基因鑲入的關係探討肝細胞癌化之機序，在細胞分子之層次上 HCC 與 HBC 間有相當的關連性。而將肝癌細胞株 HepG2 送入 B 型肝炎病毒基因後, 成功篩選出來的有 HepG2-2 及 HepG2-5 二細胞株. 本計畫擬以此 HepG2-2、HepG2-5 及無 B 型肝炎病毒基因的 HepG2 與 Hep3B 做一對照組，以細胞培養的方式，用中國傳統藥方之龍膽瀉肝湯與當歸龍薈丸(去麝香)，在各種不同極性之萃取物及以 luteolin 與 quercetin 爲 positive control 對照之下，測定細胞毒、DNA fragmentation 之分析、總蛋白激酵素之活性、MMPs (matrix metalloproteinase)、黃嘌呤氧化酵素之抑制活性、對超氧化物自由基之驅除作用等，建立一簡易又正確的篩選治療肝炎、肝癌方劑之模式。		
• 英文摘要	Decoction of Gentianae and Bolus of Angelicae Sinensis and Gentianae, Chinese traditional herb medicine, both exert the similar effect for Purging Liver-Fire and indicated for sthenic fire in the liver and gallbladder. This Bolus contains potent compounds of bitter and cold character and should not be used by patients unless their physical condition is relatively strong. The action of the Decoction is found to be much milder as compared to		

	the bolus. According to the different composition of prescription, they contain various bio-active components. This project is intended to evaluate the potential effects of those components on hepatoma by using the screening model on the inactivated protein kinase and anti-oxidative enzymes system. Hepatocellular carcinoma (HCC) is one of the most malignant disease in Taiwan, and hepatitis B virus (HBV) infection is the well-known risk factor. Karyotyping of human liver cancer cell lines and chromosome in situ hybridization of hepatitis B virus (HBV) DNA shows the possible mechanism of hepatocarcinogenesis from evidence of chromosomal changes and HBV integration patterns. The close association between HBV and HCC was further strengthened at the molecular level. HepG2-2 and HepG2-5 cell lines were derived from the HepG2 cells by transfecting with the HBV DNA. This subject is intended to screen the components which were extracted by various polar solvents system from the Decoction of Gentianae and Bolus of Angelicae Sinensis and Gentianae (no Moschus) in order to better understand their anti-cancer potential in hepatoma cells. Luteolin and quercetin, the two anti-growth and potent PTK inhibitors, will be used as positive control in those tumor cell lines in culture. Meanwhile, the in vitro assay systems established in our laboratory will be performed in order to explore their inhibitory effects on: cytotoxicity; DNA fragmentation; total protein kinase activity; MMPs (matrix metalloproteinase) secretion; xanthine oxidase activity and superoxide ani on scavenging effect. This work might provide potential anti-cancer evidence of Decoction of Gentianae and Bolus of Angelicae Sinensis and Gentanae.