

• 計畫中文名稱	沉香之抗癌活性成分		
• 計畫英文名稱	The Antitumor Principle Constituents of Aquilaria agallocha Roxb.		
• 系統編號	PC9709-0171	• 研究性質	基礎研究
• 計畫編號	NSC97-2320-B038-011	• 研究方式	學術補助
• 主管機關	行政院國家科學委員會	• 研究期間	9708 ~ 9807
• 執行機構	臺北醫學大學藥學系(所)		
• 年度	97 年	• 研究經費	1022 千元
• 研究領域	藥學		
• 研究人員	王靜瓊		
• 中文關鍵字	--		
• 英文關鍵字	--		
• 中文摘要	<p>沉香為瑞香科植物，為中藥使用外，常應用在線香及雕刻，經濟效益高，但卻為保育植物之一，不得任意砍伐。如果可以開發其果實或葉子，將可以深耕開發此植物。根據本研究室篩選植物之抗癌活性結果發現：沉香果實的殼之甲醇萃取物具體外抑制癌細胞生長之作用，且可以延長 P-388D1 擔癌小鼠之生命，因此推測其具有開發抗癌藥之潛力。另，目前尚無沉香殼之活性及成分相關文獻報導，所以若能深入探討沉香殼之抗癌活性成分，除可以作為抗癌藥之啓始物外，亦具有學術價值。本研究預計分三年進行，其主要工作項目如下：第一年：（1）以體外抑制癌細胞生長，追蹤分離沉香殼之活性成分。（2）分析沉香樹之各部位及生長期活性成分分佈。可以提供栽種參考外，或許可以由枝葉找到可替代心材之成分。第二年：（1）評估沉香殼之成分結構與活性關係並探討其體外抑制癌細胞生長之活性機轉。（2）制訂沉香殼活性成分之分離純化標準流程，可提供分離大量活性成分之參考。第三年：（1）沉香殼活性成分餵服健康鼠，評估其於體內之吸收狀況，推算有效劑量，以便進行體內抗癌活性試驗。（2）利用 P-388D1 擔癌鼠之模式，評估沉香殼活性成分之體內抗癌活性作用。</p>		
• 英文摘要	<p>Aquilaria agallocha Roxb. (Thymelaeaceae) is used as Chinese medicine, and applied to the materials of a stick of incense and carving. However, Aquilaria agallocha is one of the endangered plants and has been protected by CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora), we do not hew it. Therefore, we wanted to develop the fruits and</p>		

leaves of *Aquilaria agallocha*. In our previously studies, the shells of *Aquilaria agallocha* were extracted with MeOH and the extracts could inhibit the tumor cell growth and prolong the survival days of the P-388D1 bearing mice. Therefore, the anti-tumor principal constituents of the shells of *Aquilaria agallocha* will be explored in this study. We plan the project for three year. In 1st year 1. The cytotoxicity principle constituents will be isolated, purified and structurally determined by a bioassay-guided method in this proposal. 2. Principle constituents in *Aquilaria agallocha* collection at each month will be analyzed. In 2nd year 1. The relation between structures and activity of principle constituents will be discussed and the mechanism of the cytotoxic compounds causing cell death will be explored. 2. Establish the purification and analysis standard operating procedure (SOP) of the cytotoxic compounds. In 3rd year 1. The pharmacokinetic of the cytotoxic compounds will be measured in mice. 2. The cytotoxic compounds will be tested in P-388D1 tumor-bearing mice, and in vivo antitumor effect will be identified.