• 系統編號	RC9011-0054		
• 計畫中文名稱	Ketoprofen 水性貼布之滲透性和黏著性適宜化研究		
• 計畫英文名稱	Simultaneous Optimization of Penetration and Adhesion for Ketoprofen Poultice		
• 主管機關	行政院國家科學委員會	• 計畫編號	NSC89-2314-B038-006
• 執行機構	台北醫學院藥學系		
• 本期期間	8808 ~ 8907		
• 報告頁數	9 頁	• 使用語言	英文
• 研究人員	何秀娥 Ho, Hsiu-O		
• 中文關鍵字	2-(3-苯基醯苯基)丙酸；經皮吸收貼布；穿透；最佳化設計；黏著性		
• 英文關鍵字	Ketoprofen；Transdermal delivery patch；Penetration；Optimal design；Adhesion		

• 中文摘要

本計畫利用水，Propylene glycol，和甘油爲溶媒，配合 Gelatin 和 Sodium polyacrylate 水性基質配製 Ketoprofen 貼布。Mixture Design 用來評估以上組成如何影響 Ketoprofen 貼布的滲透性和黏著性。Gelatin 爲影響 Ketofrofen 貼布黏著性的主要因子。甘油具有某種程度增加 Ketoprofen 滲透性的作用。最後，一個與市售品比較下具有適當滲透性和黏著性的處方被發展。

• 英文摘要

Topical poultices of ketoprofen were prepared using deionized water, propylene glycol, and glycerin as the vehicle in combination with hydrophilic matrix materials, including gelatin and sodium polyacrylate. A mixture design utilized to evaluate the influence of these constituents on the percutaneous penetration of ketoprofen and the adhesion of the poultice was evaluated. The adhesion of the poultice was measured based on the L-Peel test method using a Tensile and Compression Testing Machine. Percutaneous delivery was conducted using nude mouse skin as the barrier. The poultice containing the highest weight fraction of gelatin demonstrated the highest value of peak stress, whereas the poultice containing 0% weight fraction of gelatin showed the smallest value among all formulations. This indicates that gelatin was the main factor determining the adhesion of the poultice. On the contrary, the formulation having the maximal penetration rate was determined to be the vehicle with 0% weight fraction of gelatin and the highest percent weight fraction of glycerin. This indicates that the presence of glycerin in the poultice was able to increase the flux of ketoprofen to some extents. Finally, an optimized formulation with acceptable adhesion and with a penetration rate comparable to a commercial product was developed in this study.