

• 系統編號	RN9305-2977		
• 計畫中文名稱	金屬蛋白酵素 9 於痛風性關節炎中角色之探討---從臨床分析到分子機制研究		
• 計畫英文名稱	Study on the Expression of Matrix Metalloproteinase 9 in Gouty Arthritis---From Clinical Analysis to Cellular Mechanism Study		
• 主管機關	行政院國家科學委員會	• 計畫編號	NSC91-2311-B038-004
• 執行機構	台北醫學院醫學系		
• 本期期間	9108 ~ 9207		
• 報告頁數	10 頁	• 使用語言	--
• 研究人員	蔡淑慧 Tsai, Shu-Hui		
• 中文關鍵字	痛風性關節炎; 金屬蛋白酵素 9; 細胞機轉; 臨床分析		
• 英文關鍵字	gouty arthritis; Matrix Metalloproteinase 9 (MMP-9); Clinical analysis; MSU		
• 中文摘要	查無中文摘要		
• 英文摘要	To investigate the relevance of gelatinase-B (matrix metalloproteinase 9, MMP-9) in gouty arthritis (GA), we tested the occurrence of MMP-9 in GA patients and cell culture system. Gelatinolytic activity in the synovial uid (SF) of patients with different kinds of arthritis was assessed by gelatin zymography. A predominant 92-kDa MMP-9 gelatinolytic activity was evident in rheumatoid arthritis (RA) and GA samples, but no activity was observed in osteoarthritis (OA) samples. Among the 53 SF samples (9 RA, 24 GA, and 20 OA) analyzed for MMP-9 and tissue inhibitor of metalloproteinase (TIMP-1) antigen levels by ELISA, MMP-9 antigen levels were elevated tenfold in GA SF compared with OA SF. In addition, GA synovial tissue extracts revealed elevated levels of MMP-9 expression as compared to OA tissue extracts by Western blot and RT-PCR analysis. Immunohistochemical studies demonstrated that MMP-9 immunoreactivity was more intense in GA than in OA synovial tissues. Furthermore, macrophages activation by gouty crystals in vitro was examined. Crystals stimulated MMP-9 gene expression in macrophage cell line and such stimulation was suppressed by PD98059. These ndings suggest that the abnormal production of MMP-9 by macrophages is a reaction of the pathological conditions in joints of patients with GA, and that the activation of MMP-9 in the joint is known to play an important role in joint disease.		