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• 計畫英文名稱	Studies of the Expression Patterns of the Extracellular Matrix, the Regulatory Mechanism, and Their Association with the Progression of Endometriosis
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• 中文關鍵字	細胞外質; 金屬蛋白胨組織抑制劑; 細胞外質金屬蛋白胨; 子宮內膜異位症
• 英文關鍵字	Extracellular matrix (ECM); Tissue inhibitor for metalloproteinase (TIMP); Matrix metalloproteinase (MMP); ; Endometriosis
• 中文摘要	胚胎著床牽涉胚胎與子宮內膜細胞的黏合作用，其上皮細胞及內皮細胞及其所分泌細胞外質(extracellular matrix, ECM)的成份及功能，扮演進行胚胎著床時重要的決定因素，而子宮內膜異位症(endometriosis)是由於子宮內膜組織因不明原因附著於不適當的位置，導致胚胎著床不易，增加流產的機率，造成不孕，全世界有 3%-5%的婦女患有子宮內膜異位，在台灣，平均每四位上不孕症專科求診的婦女病患即有一位患有子宮內膜異位症，病變的子宮內膜組織具類似惡性腫瘤的性質，可轉移，滲透，侵犯及附著於周邊的器官及組織，這些作用必須透過破壞包覆於細胞周圍的細胞外質(ECM)及重組(remodeling)，僅管細胞外質的破壞及重組已被認爲是胚胎著床及癌腫瘤進行轉移的必要過程，然而，對於調節細胞外質重組的酵素-金屬蛋白質酵素(Matrix metalloprotease, MMP)和其抑制劑(TIMPs)於子宮內膜異位症患者體內異常之表現，及其調節機轉及訊息傳遞之機制並不清楚，因此，本研究著重在觀察細胞外質金屬蛋白之表現與所扮演之調節角色作系統性及全面性的分析，並評估其用於疾病診斷標記之可行性，本研究選用初期子宮內膜異位症患者及正常生育年齡之婦女自願捐贈之血液及腹腔液爲研究對象，發現其中游離型 TIMP-1 之表現在未經治療之子宮內膜異位症患者血液及腹腔液以西方墨點法被偵測到(72%)，但經 GnRH analog 治療後之患者(21%)及正常受試者則無法被偵測到，ELISA 分析顯示 TIMP-1 之總濃度在各組間並無明顯差異推測此現象可能與 TIMP-1 無法與 MMP 做結合以抑制 MMP 的活性或 MMP 的表現量減少有關，ELISA 結果顯示 MMP9 濃度在未經治療之子宮內膜異位症患者較已經治療之患者爲低($p< 0.05$)低，本研究發現血清中 TIMP-1 可作爲早期子宮內膜異位的診斷標計(markers)之一 .
• 英文摘要	Objectives: To investigate the expression of matrix metalloproteinases (MMPs) and their inhibitors, tissue inhibitors of matrix metalloproteinases (TIMPs) in serum in women with endometriosis. Design: Molecular studies in serum. Setting: Sera were collected at the department of obstetrics and gynecology in

Taipei Medical University Hospital. The experiments were carried out in the Graduate Institute of Biomedical Materials in Taipei Medical University. Patients: Sera were collected from women with endometriosis (stage 1 and 2) without receiving GnRHa treatment, with GnRHa treatment, pregnent and non-pregnant women. Intervention(s): None. Main outcome measure(s): Western blot analysis and enzyme linked immunoadsorbent assay. Results: Total 102 serum samples were investigated for the expression of TIMP-1 by western blot analysis. Up to 72% of women (23/32) with endometriosis (stage 1 and 2) were detected positively for TIMP-1 in serum, whereas 28% (8/29) in endometriosis patients after GnRHa treatment, and none of pregnant and infertile women were detected the presence of TIMP-1. ELISA showed that no significant difference in total concentrations of TIMP-1 between the patients with and without receiving GnRHa treatment. However, the level of MMP9 was significantly decreased in patients without GnRHa treatment. Conclusions: TIMP-1 could be a useful serum marker for early diagnosis of endometriosis.