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• 計畫英文名稱	The Role of Extracellular ATP Induced Intracellular Signaling in Human Granulosa-luteal Cells	
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• 中文關鍵字	腺嘌呤核苷三磷酸; 人類卵巢顆粒細胞; 細胞核轉移	
• 英文關鍵字	ATP; Human granulosa-luteal cell (hGLCs); Nuclear translocation; Mitogen-activated protein kinase	
• 中文摘要	<p>在我們之前研究得知，在人類卵巢顆粒細胞，細胞外的腺嘌呤核苷三磷酸 (ATP)會活化細胞內訊息傳遞系統;例如活化 protein kinase C 及 mitogen-activated protein kinase (MAPK) ,並且會調控人類絨毛膜刺激性腺激素 (human chorionic gonadotropin) 對卵巢的作用。本篇研究的設計主要探討在人類卵巢顆粒細胞，細胞外的 ATP 活化 mitogen-activated protein kinase (MAPK) 的訊息傳遞路徑以及在生理功能上所扮演的角色。西方墨點分析法 (Western blot analysis)檢測 MAPK 及 protein kinase B(PKB /Akt)；以 ERK1/ERK2 (p42mapk 和 p44mapk) 個別磷酸化形式的單株抗體來做偵測，證實活化 MAPK 會隨時間的不同而產生變化。相對的，磷酸化形式的 Akt(thr308)和 Akt(ser473) 並沒有因 ATP 而產生明顯變化。更進一步藉由共軛焦螢光顯微鏡證實 ATP 可以使得活化之 MAPK 由細胞質中轉移至細胞核內。</p>	
• 英文摘要	<p>The intracellular signaling pathway such as mitogen-activated protein kinases (MAPKs), protein kinase B (PKB/Akt) are related with cell differentiation and proliferation. Our previous data demonstrated that adenosine triphosphate (ATP) play a crucial role in regulating ovarian function by activating intracellular signaling pathway such as calcium oscillations, protein kinase C (PKC) and MAPKs activation. In addition, ATP modulates human chorionic gonadotropin (hCG) action in progesterone production. In the present study, western blot analysis which detected the total and phosphorylated forms of ERK1/ERK2, demonstrated that exogenous ATP activated MAPK in a dose-and time-dependent manner in human granulosa-luteal cells (hGLCs). In contrast, phospho-Akt (thr308) and phospho-Akt (ser473) not significantly affected. Immunofluorescent staining revealed that phosphorylated</p>	

ERKs were translocated from the cytoplasm into the nucleus subsequent to 10  $\mu$ M ATP treatment.