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論文 名稱 (中)	評估亞美罌粟鹼對於脂多醣在大鼠腎間隔細胞中所誘導發炎性細胞激素表現之抑制效果
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關鍵字(中)	亞美罌粟鹼 細胞激素 腎絲球腎炎 脂多醣 腎間隔細胞
關鍵字(英)	armepavine TNF- α IL-6 mesangial cells Lipopolysaccharide
摘要(中)	<p>根據行政院衛生署近十年的統計，發現每年死於腎炎(Nephritis)的人數節節上升，為國人十大死因之一，因此值得我們進行深入探討與研究。腎絲球腎炎(Glomerulonephritis；GN)為腎炎中發生率極高的類型之一。雖然其真正發病原因並不明瞭，但推測可能原因包括有，腎絲球中沉積大量的免疫複合體(Immunocomplex)、腎間隔細胞(Mesangial cell)的異常增生、發炎性細胞激素(Inflammatory cytokines)的過度產生。然而，部份疾病也極易併發腎絲球腎炎，例如糖尿病、高血壓、紅瘡性狼斑、上呼吸道感染等。根據許多文獻報導得知，腎間隔細胞的過度增生與否，已成為腎絲球腎炎的重要指標之一。脂多醣(Lipopolysaccharide；LPS)能夠刺激腎間</p>

	<p>膈細胞釋放 M-CSF 與 ICAM-1，以及多種發炎性細胞激素，包括 IL-1β、IL-6、TNF-α 等。由本實驗室過去的研究結果發現，由蓮子(Nelumbo nucifera)純化之有效成分，亞美罌粟鹼(Armejavine; C19H23O3N; MW313)具有良好之抗發炎與免疫調控之活性，因此在本研究中，探討亞美罌粟鹼對於在腎間膈細胞中，LPS 所誘導發炎性細胞激素基因表現之影響，以評估亞美罌粟鹼未來減緩腎炎疾病之潛力。由結果發現，LPS 確實能引發大鼠腎間膈細胞產生 IL-6 以及 TNF-α 等發炎性細胞激素，而亞美罌粟鹼可以明顯抑制 IL-6 以及 TNF-α 之表現，並呈現劑量性反應。利用各種訊息抑制劑加入，證明 LPS 引起 TNF-α 基因於大鼠腎間膈細胞中表現與 Mitogen-activated protein kinase (MAPK)、NF-κ B 與 Phosphoinositide 3-kinase (PI3K)等訊息傳導途徑有關。經實驗證實亞美罌粟鹼對於 LPS 所引起之 MAPK 與 NF-κ B 活化具有明顯抑制作用，而在高濃度情況下，對於 PI3K 活性亦具有抑制效果。因此推測，亞美罌粟鹼可以藉由調控 MAPK、NF-κ B 與 PI3K 之活化，而降低 TNF-α 基因於大鼠腎間膈細胞中之表現。</p>
<p>摘要 (英)</p>	<p>According to the information from Department of Health, Executive Yuan, Taiwan, people died in nephropathy gradually increased. Glomerulonephritis is the most occurrence disease in all kinds of nephritis. Many studies indicate the pathogenesis of glomerulonephritis is related to immune complexes deposition, mesangial cells proliferation, and inflammatory cytokines overexpression such as interleukin-1β (IL-β), IL-6, and tumor necrosis factor-α (TNF-α). Moreover, some diseases including diabetes, hypertension, systemic lupus erythematosus, and upper respiratory tract infection often accompany glomerulonephritis. Previous studies indicate mesangial cells proliferation is one of the diagnostic markers of glomerulonephritis. Lipopolysaccharide (LPS) stimulated mesangial cells to release numerous inflammatory cytokines, such as IL-1β, IL-6, and TNF-α. They also secrete M-CSF and ICAM-1 to recruit macrophages. Our previous studies indicate that armejavine (C19H23O3N; MW313) purified from Nelumbo nucifera possesses immune modulatory functions. To evaluate the healing effects of armejavine on nephritis, the rat mesangial cells were applied as target cells, and effects of armejavine on inflammatory cytokines expression such as TNF-α and IL-6 were determined. The results demonstrated that LPS stimulated IL-6 and TNF-α mRNA expression in rat mesangial cells. However, armejavine decreased the levels of these transcripts in the cells with a dose-dependent manner. The results demonstrated that LPS stimulated TNF-α gene expression in rat mesangial cells by activation of mitogen-activated protein kinase (MAPK), NF-κ B, and phosphoinositide 3-kinase (PI3K) pathways. The data proved that armejavine inhibited activation of MAPK, PI3K, and NF-κ B in rat mesangial cells induced by LPS. Thus, we suggested that armejavine decreased TNF-α gene expression in rat mesangial cells through modulation of MAPK, NF-κ B and PI3K activation.</p>
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