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• 中文摘要

本計畫研究目地是以細菌內毒素(LPS)刺激巨噬細胞 Raw264.7 細胞株利用基因微陣及轉錄因子微陣分析各種解表藥物可能影響的基因群及可能參與的轉錄因子。 以 RT-PCR 實驗找出以 LPS 藥物刺激巨噬細胞促發炎基因 TNF？？ 表現所需 LPS 的最佳作用劑量及作用時間。另以西醫常用之抗發炎藥物 methylprednisolon 爲一正控制對照組。以老鼠發炎相關細胞激素或趨化物質及其受體的基因微陣分析發現包括發現包括 TNF-？？？z, macrophage inflammatory protein 1a (MIP-1a), 1b (MIP-1b), mus musculus C10-like chemokine, 及 mus musculus migration inhibitory factor (Mif, 10 Kd protein)等基因的表現均因 MP 的同時處理有明顯的受到抑制。與 MP 比較，黃連、羌活、菊花、桂枝、麻黃、栝樓根對前述基因表現的抑制作用均較 MP 低，其中以羌活，菊花及栝樓根對這些基因表現的抑制作用與 MP 的效果較相似。另以轉錄因子微陣分析解表藥物於巨噬細胞株中對發炎相關基因表現的影響可能參與的轉錄因子以推測其可能調控路徑之研究，結果顯示與 methylprednisolon 相較，黃連、柴胡、知母、龍膽、菊花均能活化 GR 及 AP-2 轉錄因子之活性；而羌活、荊芥、牡丹皮、連翹、地骨皮、白芷、桂枝、麻黃、青蒿、桑葉、栝樓根則活化 Oct-1 轉錄因子之活性。由此可知於最終解表的效能之下，中藥解表作用的確因藥物之不同有所差異。

• 英文摘要

Being capable of promoting perspiration, dispelling fever and chills, Chinese diaphoretics are commonly used for relieving the exterior symptoms caused by pathogenic infection or environmental factors. To investigate the underlying molecular mechanism, the impact of Chinese diaphoretics on inflammatory related gene expression in lipopolysaccharide (LPS) - activated mouse Raw264.7 macrophage cells was examined by array analysis. From the mouse inflammatory cytokines and receptors gene array analysis, our results showed gene expressions of TNF-？H？H, macrophage inflammatory protein 1a (MIP-1a), 1b (MIP-1b), mus musculus C10-like chemokine, and mus musculus migration inhibitory factor (Mif, 10 Kd protein) were inhibited by MP. Similar

impact on those gene expressions was detected on LPS-activated cells upon Notopterygii Rhizoma, Chrysanthemi flos, or Trichosanthis radix treatment. A totally different gene expression profile was observed in cells treated with LPS plus Coptis rhizome, or with cinnamon bark. Using the transcription factors protein-DNA arrays, coptis rhizoma, bupleuri radix, anemarrhenae rhizoma, gentianae radix,and chrysanthemi flos were found to activate the transcription factors GR and AP-2 which were also activated by methylprednisolon. While, notopterygii rhizom, schizonepetae herba, moutanradicis cortex, forsythiae fructus, lycii radicis cortex, angelicaedahuricae radix, cinnamomi ramulus, ephedrae herba, artemisiae apiaceae herba, inulberry leaf, and trichosanthis radix were capable of activating the transcription factor Oct-1 DNA binding activity.