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研究生(中)	翁淑真
研究生(英)	Weng Shu-Chen
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指導教授(中)	郭育綺 周秀慧
指導教授(英)	Kau Yuh-Chi Chou Shiu-Huey
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摘要(中)	蟬花（Cordyceps cicadae）為傳統之真菌藥材，一般用來當做為滋補強壯之健康食品，本研究乃根據生物活性之測定，探討由蟬花所純化之有效成分 2-1-U-(3)-6A—過氧麥角醇（ergosterol peroxide），對人類單核細胞

	（human mononuclear cells）之增生、細胞激素基因表現與產生和細胞週期進行的影響。結果顯示：（1）利用 3H-thymindine 吸收量檢測法，發現過氧麥角醇可以抑制由植物凝集素（phytohemagglutinin；PHA）刺激所引起之單核細胞增生，其百分之五十抑制濃度（IC50）為 6.5 ?M；（2）利用 Propidium Iodide 將 DNA 染色並以流式細胞分析儀分析，結果顯示過氧麥角醇會使細胞週期休止於 G0/G1 階段；（3）利用免疫酵素測定法，發現過氧麥角醇可以降低細胞激素之產生，例如第二介白質（interleukin-2；IL-2），甲種腫瘤壞死因子（Tumor necrosis factor-?；TNF-?）與丙種干擾素（Interferon-?；IFN-?）；（4）利用逆轉錄?聚合鏈連鎖反應（Reverse transcriptase - polymerase chain reaction；RT-PCR）分析細胞激素 mRNA 表現，結果顯示過氧麥角醇可以抑制細胞激素 IL-2 mRNA 人類單核細胞的表現；（5）免疫螢光染色結果顯示，過氧麥角醇可以降低 cyclin E 在單核細胞的表現；（6）利用西方點墨法（Western blot analysis），我們則偵測到過氧麥角醇可增加 40kd 磷酸化蛋白質。綜合以上實驗結果，我們認為在蟬花中含有免疫調控因子—過氧麥角醇，它能調控人類單核細胞之免疫反應，並推測其可能透過影響蛋白質磷酸化之表現，而抑制了細胞激素與 cyclin E 之產生，進而使得細胞週期無法進行，使人類單核細胞增生受到抑制。
摘要(英)	Effect of ergosterol peroxide (C28H44O3; 428 M.W.) isolated from Cordyceps cicadae (C. cicadae) on cell proliferation of primary human T cells stimulated with phytohemagglutinin (PHA) were examined. The result showed that ergosterol peroxide suppressed T cells proliferation activated by PHA and acted appeared to be well, occurring about 0-12 hr after stimulation with PHA. The synthesis of total cellular proteins and RNA in activated cells were attenuated by ergosterol peroxide. Cell cycle analysis indicated that ergosterol peroxide arrested the cell cycle progression of activated T cell from G1 transition to S phase. In an attempt to further localize the point in the cell cycle where arrest occurred, a set of key regulatory events leading to G1/S boundary were examined, including cytokine genes expression and cyclin E proteins synthesis. Ergosterol peroxide decreased cytokines production in activated T lymphocytes such as interleukin-2 (IL-2), tumor necrosis factor-? (TNF-?), interferon-?, IFN-? in a dose-dependent manner. The IL-2 mRNA expressed in activated T lymphocytes were impaired by ergosterol peroxide. In addition, results of immunofluorescent staining indicated that cyclin E proteins expressed in activated T lymphocytes were decreased by ergosterol peroxide. The level of phosphorylated p40 protein was increased in ergosterol peroxide treated T cells. These result suggest that the suppressory effects of ergosterol peroxide on activated T cells proliferation seem to be mediated, at least in part, through inhibition early transcripts of T cells induced by PHA especially those of important cytokines, Il-2 and cyclin E then arresting cell cycle progression in the cells. We suggested that C. cicadae contained an immunomodulatory agent. However, the elucidation of its mechanisms of actions is subject further study.
論文目次	中文摘要……..1 英文摘要……..3 壹、 前

	言……..5 貳、 材料與方 法……17 參、 結 果……33 肆、 討 論……46 參考文 獻……54 圖 表……63
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