

山欖經由抑制在巨噬細胞中 miR-146a 表現有抗發炎和促進細胞凋亡的功能

Planchonella obovata has anti-inflammatory ability and induces apoptosis via inhibition of miR-146a expression in macrophage cell line RAW264.7

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發炎反應為人體抵抗外來病原菌入侵的一種機制，一般反應為紅腫熱痛，使血管擴張、組織胺滲出，產生痛覺。若發炎反應無法控制，將導致被破壞的組織無法修復、造成肌肉損傷、引起疾病。天然物中常含有許多抗炎和抗癌成分，我們發現實驗中先加入脂多醣(LPS, lipopolysaccharide)刺激老鼠巨噬細胞(RAW264.7)產生發炎反應，再加入天然物的山欖(Planchonella obovata)所萃取出的成分，可以使 Nitric oxide (NO)的產生有明顯抑制。再利用 Luciferase 冷光報導基因及西方點墨法測試山欖萃取成分是否抑制發炎時誘發性環氧化酶 2 (COX-2, cyclooxygenase 2) 的表現。miR-146a 在發炎時有誘發表達，將使用山欖萃取成分測試是否抑制 miR-146a 誘發表現。同時，分析 miR-146a 發炎相關和細胞凋亡及細胞自噬之標的蛋白表現的情形。了解山欖在發炎反應和細胞凋亡與自噬中扮演的角色，進而研究出抗發炎的新藥物。

關鍵字：山欖、miR-146a、發炎及細胞凋亡

Abstract: Stomachache related to intestinal inflammation may lead to a disease named IBS. Inflammation can induce COX-2 expression, which may be inhibited by anti-inflammatory botanical and phytochemicals. We found that the component of *Planchonella obovata* could inhibit NO production in LPS-stimulated RAW264.7 cells. Moreover, we analyzed the expression of COX-2 and miR-146a in *Planchonella obovata*-treated cells. Our findings suggest that *Planchonella obovata* may be a potential Chinese herbal medicine with the antiinflammatory, anti-cancer and anti-IBS properties.

Keyword: *Planchonella obovata*, colon cancer, migration, invasion