

中樞作用中藥之研究

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中藥為我國傳統醫藥之寶藏，經歷數千年之臨床經驗，因屬經驗醫學，較缺乏科學性之研究，因此須以現代科學研究方法加以評估。行政院國家科學委員會及衛生署規劃中藥研究，近幾年來國內中樞作用中藥之研究成果概略如下：

1. 從厚朴分離出 honokiol 及 magnolol，發現 honokiol 具中樞抑制之作用，係直接作用於中樞海馬回區膽鹼神經末梢接受器，增加鉀離子引發乙醯膽鹼之釋出增加所致。
2. 對中樞紋狀體區 Dopamine 接受器具親和力之中藥：赤芍、鉤藤。
3. 對中樞大腦皮質區 5-hydroxytryptamine 接受器具親和力之中藥：獨活、菊花、遠志、酸棗仁。
4. 對中樞紋狀體區 Dopamine 接受器及大腦皮質區 5-hydroxytryptamine 接受器均具親和力之中藥：延胡索、石菖蒲、當歸、黃芩。
5. 延胡索分離 dl-tetrahydropalmatine，發現可抑制腦下垂體前葉分泌 TSH 而產生抗甲狀腺機能亢進作用；並可阻斷腦部紋狀體突觸後 dopamine 接受器而產生鎮靜催眠作用；另外亦可增加腦部紋狀體 dopamine 濃度及降低視丘 serotonin 之濃度而產生降血壓作用。
6. 天麻分離 p-hydroxybenzyl alcohol，發現 p-hydroxybenzyl alcohol 可改善 cycloheximide 誘發之記憶鞏固障礙，主要經由降低中樞 serotonergic system 之活性。

7. 紫背一點廣全草提取物，具有抑制鼯鼠對醋酸所誘發的扭體反應。其葉之乙酸乙酯層中 β -sitosterol 及 palmitic acid 能抑制醋酸誘發的鼯鼠扭體反應；而 β -sitosterol、stigmasterol、palmitic acid 及 L-norlucine 及葉之水層中 adenosine 等對於福馬林所誘發的疼痛之後期舔足時間具有抑制作用，可知其鎮痛作用的活性成分主要存在於葉中。

STUDIES ON CHINESE HERBS ACTING ON THE CENTRAL NERVOUS SYSTEM

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Chinese herbs are treasures of Chinese medicine. Because it belongs to experienced medicine, the data obtained by scientific methods is very limited. For the reason, National Science Council and National Health Department established the plan in Chinese herbal study. In the recent studies on Chinese herbs acting on the central nervous system, the reported results are listed as follows:

1. Honokiol and magnolol are active ingredients of Magnoliae Cortex and elicit central depressant effects. The effect of honokiol was related to enhance K(+)-evoked Ach release directly on hippocampal cholinergic terminals via receptors.
2. The herbs which predominantly act on the striatum dopamine receptors are listed as follows : Chishaoyao(Paeoniae Veitchii Radix), Gouteng(Unicariae Ramulus et Uncus).
3. The herbs which predominantly act on the cortex 5-HT receptors are listed as follow : Duhuo(Angelicae Tuhuo Radix), Juhua(Chrysanthemi Flos), Yuanzhi(Polygalae Radix), Suanzaoren(Semen Zizphi spinose).
4. The herbs which act on the striatum dopamine receptors and cortex 5-HT receptors are listed as follows : Yanhusuo(Corydalis Tuber), Shichangpu(Acori Graminei Rhizoma), Danggui(Angelicae sinensis Radix), Huangqin(Scutellariae Radix).

5. dl-Tetrahydropalmatine is an active ingredient of *Corydalis Tuber*. Its antihyperthyroidism effect was related to inhibit TSH secretion in anterior pituitary, and sedative effect was due to block dopamine postsynaptic receptor in the striatum. Moreover, its antihypertensive effect was related to the increase of dopamine concentration in the striatum and the decrease of serotonin concentration in the hypothalamus.
6. p-Hydroxybenzyl alcohol is an active ingredient of *Gastrodiae Rhizoma*. Its memory-improving effect in cycloheximide-induced impairment was related to decrease the serotonergic neuronal activity.
7. The crude extract of *Nervilla purpurea* (NP) has antinociceptive effect. β -sitosterol and palmatic acid extracted from NP leaves could inhibit the writhing response induced by acetic acid in mice. β -sitosterol, stigmasterol, palmatic acid, L-norlucine and adenosine of NP could inhibit the licking response induced by formalin in the late phase.