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• 中文關鍵字	中醫；山梔子；赤芍；蒼耳子；降血糖作用；降血糖劑
• 英文關鍵字	Chinese medicine；Gardeniae fructus；Paeoniae radix；Xanthii fructus；Hypoglycemic activity；Hypoglycemic drug
• 中文摘要	爲了要探討一些在台灣常被用來治療糖尿病的植物它們有關之降血糖活性成分,本實驗室根據先前的植物篩選而從中選取出山梔子,赤芍藥及蒼耳子,分別分離其所含主成分並做其降血糖活性的研究,以期開發出新的醫療資源。 藉由各種管柱層析法,中壓液相層析法及高效液相層析法共分離出十四個化合物。根據其物理數據、核磁共振光譜、質譜及 X-光單晶繞射法等判定,從山梔子純化之六個化合物,爲 Genipin、Geniposide、Genipin-1-.beta.-D-gentiobioside、Shanzhiside、Gardenoside 和 Methyldeacetylasperulosidate。從赤芍藥分離、純化出三個化合物,其結構分別確定爲 Paeoniflorin、8-debenzoylpaeoniflorin 及.beta.-sitosterol-3-.beta.-D-glucoside。此外,從蒼耳子亦純化出五個化合物,其結構分別判定爲 Caffeic acid、Potassium 3-O-caffeoyl quinate、1,5-di-O-caffeoyl quinic acid、1,3,5-tri-O-caffeoyl quinic acid 及 7-hydroxymethyl-8,8-dimethyl-4,8-dihydrobezo [1,4]thiazine-3,5-dione。上述化合物中 Paeoniflorin、8-debenzoyl-paeoniflorin 及 Potassium 3-O-caffeoyl quinate、1,5-di-O-caffeoyl quinic acid、1,3,5-tri-O-caffeoyl quinic acid 及 7-hydroxymethyl-8,8-dimethyl-4,8-dihydrobezo [1,4]thiazine-3,5-dione 經初步藥理測定具有降血糖之活性。 7-hydroxymethyl-8,8-dimethyl-4,8-dihydrobenzo [1,4]thiazine-3,5-dione 爲文獻上尚未有記載之新化合物。
• 英文摘要	In order to clarify the active components of Chinese herbs frequently used to treat diabetes mellitus in Taiwan, Gardeniae Fructus, Paeoniae Radix, and Xanthii Fructus were chosen for further investigation based on their positive preliminary results. We isolated 14 compounds from above three mentioned plants by using various column chromatography including MPLC and HPLC. Their

structures were determined based on the analysis of NMR, MS spectra and X-ray single crystal diffraction. Six compounds obtained from Gardeniae Fructus were genipin, geniposide, genipin-1-.beta.-D-gentiobioside, shanzhiside, gardenoside and methyldeacetylasperulosidate. Three compounds isolated from Paeoniae Radix were paeoniflorin, 8-debenzoylpaeoniflorin and .beta.-sitosterol-3-.beta.-D-glucoside. Five compounds obtained from Xanthii Fructus were caffeic acid, potassium 3-O-caffeoyl quinate, 1,5-di-O-caffeoyl quinic acid, 1,3,5-tri-O-caffeoyl quinic acid and 7-hydroxymethyl-8,8-dimethyl-4,8-dihydro-benzo [1,4]thiazine-3,5-dione. Among them, paeoniflorin, 8-debenzoylpaeoniflorin and potassium 3-O-caffeoyl quinate, 1,5-di-O-caffeoyl quinic acid, 1,3,5-tri-O-caffeoyl quinic acid and 7-hydroxymethyl-8,8-dimethyl-4,8-dihydro-benzo [1,4]thiazine-3,5-dione were found to possess hypoglycemic activity. The 7-hydroxymethyl-8,8-dimethyl-4,8-dihydro-benzo [1,4]thiazine-3,5-dione is a new compound.