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• 中文關鍵字	糖尿病；血糖；葡萄糖耐量試驗；大本山葡萄；天仙果；；；
• 英文關鍵字	diabetics；blood sugar；glucose tolerance；；；；；
• 中文摘要	一般而言，人體會將吃進去的澱粉類食物轉變成葡萄糖，充當身體的燃料，而胰島素是由胰臟所製造的一種荷爾蒙，它能讓葡萄糖進入細胞內，提供熱能。糖尿病指的是人體內的胰臟不能製造足夠的胰島素，導致葡萄糖無法充分進入細胞內，血糖濃度就會升高形成糖尿病。根據衛生署的統計，糖尿病居十大死因的第四位，而目前爲止，糖尿病的治療基本上有三大方法，分別是(1)飲食療法(2)運動療法(3)藥物療法。本研究藉由 8~12 週實驗動物的模式，經由觀察空腹後血糖值、葡萄糖耐量性、血清中胰島素值等項目瞭解受試物(大本山葡萄與天仙果)是否具有調節血糖之作用。實驗結果顯示，高血糖組別之大鼠具有多吃、多喝及多尿狀況，其飼料消耗量都較正常組高，但由於其無法轉換攝取之能量，因此體重上升幅度較正常對照組低。給予受試物十二週後發現，低、中、高三個劑量的組別其血糖皆有下降的趨勢，且高劑量組與正常組相比達到顯著性差異($p < 0.05$)。血清中胰島素的分析在高劑量組別中亦有相同的效果。葡萄糖耐量測定方面，STZ 的組別在腹腔注射葡萄糖之後皆有血糖值上升的現象，且相較於給藥組也都有較高的血糖峰值，因此發現受試物具有改善其對葡萄糖耐受性不佳的潛力。針對降低血糖並促進胰島素的分泌能力，無論是在大本山葡萄或是天仙果的組別中皆有成效，因此此兩種受試物於本試驗的結果爲具有開發成降血糖功能性食品的潛能。
• 英文摘要	In general, starch like food was ingested into human body and transfer to glucose, serving as sources of energy. Insulin is a pancreas secreting hormone, helping glucose enter into cells. Diabetes is caused by insufficient secretion of insulin from pancreas, leading to insufficient intake of glucose of the cells and eventually becoming hyperglycemia. According to the official report of the Department of Health, diabetes is the fourth of the ten leading course of death in Taiwan. Currently, the treatment of diabetes can be divided into three major categories: (1) Diet control.

(2) Exercise. (3) Medication. The aims of this study was to investigate the effect of the tested compounds (Dabensanputau and Tensianguo) in regulating the blood sugar through monitoring the fasting serum glucose levels, glucose tolerance and serum insulin levels by using the streptozotocin (STZ)-induced diabetic rats model. Our results indicated that the STZ-induced diabetic rats possess symptoms of eat-more, drink-more and pee-more. Although the consumption of diet in STZ-induced diabetic rats is higher than the control rats, the gain of body weight is lower than the control rats. When the STZ-induced diabetic rats were treated with low, medium and high doses of tested compounds, we found a decreased trend of blood sugar and with significance in the high dose group ($p < 0.05$). Similar results were also found in the serum insulin level in the high dose group. In addition, the improvement of glucose tolerant could be detected in the STZ-induced diabetic rats when treated with tested compounds. Thus, we concluded that both the tested compounds possess the abilities to decrease blood sugar and increase insulin secretion, and have the potential to serve as a diabetes-controlling functional food.