計畫中文名稱	山藥應用於心血管疾病保健食品之開發---從改善血液黏度暨降低高血壓模式評估		
計畫英文名稱	The Application of Yam in Developing Healthy Foods for Cardiovascular Diseases --- the Evaluation of the Model in Improving Blood Viscosity and Antihypertension		
系統編號	PG9507-3189	• 研究性質	應用研究
計畫編號	95 農科-6.2.1-科-a5	• 研究方式	合作研究
主管機關	--	• 研究期間	9504 ~ 9512
執行機構	台北醫學大學生藥學研究所		
年度	95 年	• 研究經費	3332 千元
研究領域	生物技術, 食品科技		
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中文關鍵字	--		
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中文摘要	本計畫主要是評估山藥 dioscorin 以及山藥萃取物對於老化老鼠異常血液流變參數之改善效果及機轉。同時，也一併評估山藥 dioscorin 以及山藥萃取物對於高血壓老鼠降血壓之功效及其機轉。針對血液流變部份，我們利用流變儀量測血液於高、中、低剪切率下之黏度，此外，我們也將評估山藥 dioscorin 以及山藥萃取物對於老化老鼠之紅血球聚集、紅血球變形以及全血之攜氧能力之改變情形。最後，我們更巨觀評估山藥 dioscorin 以及山藥萃取物對於老化老鼠之血液流速以及血液流量之改善情形。在輔助降血壓部分，以 10 週齡之高血壓鼠(SHR)配合正常血壓鼠(WKY)，分別進行不同劑量的一次餵食，觀察血壓 24 小時變化；選定劑量每天餵食一次，進行 8 星期，觀察血壓變化。長時間的動物餵食，每週抽血一次，觀察血液中生化指數的變化。本計畫之執行，除兼顧學術基礎研究更期許獲得專利已達成產業應用之價值。		
英文摘要	The objective of this study is to evaluate the improving effect and relevant mechanism of yam tuber and yam dioscorin and yam extracts on the abnormal hemorheological parameters of aging rats as well as the antihypertensive effects on spontaneous hypertension rats. For hemorheological measurements, plasma viscosity and blood viscosity under high, medium, and low shear flow, respectively, will be carried out using dynamic rheometer. In addition, we will also evaluate the influences of yam dioscorin and yam extracts on changes of erythrocyte deformability, erythrocyte aggregation and oxygen-carrying capability. We will further macroscopically evaluate the improving effects of yam dioscorin and yam extracts on		

	blood velocity and blood flow of aging rats. In the part of antihypertension aids, the feeding experiments of yam dioscorin or yam extracts on spontaneously hypertensive rat (SHR) will perform and Wistar Kyoto (WKY, with normal blood pressure) used as a control. One, the different amounts of yam dioscorin and yam extracts are administrated once to SHR, the changes of blood pressure are recorded during 24 h. Two, the beneficial amounts of yam dioscorin or yam extracts are used for 8-weeks administration once a day to record the changes of blood pressure. Three, the biochemical index in rat blood are determined during long-term administration. This research will develop academic research and create the values of industrial utility.