• 計畫中文名稱	稻米抗腫瘤之研究		
• 計畫英文名稱	Study on the Anti-Tumor Effect of Rice		
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• 研究領域	食品科技		
• 研究人員	施純光,鄭心嫻		
• 中文關鍵字	稻米；抗腫瘤；大腸癌；預防；		
• 英文關鍵字	Rice；Anti-tumor；Colorectal Cancer；Prevention		
• 中文摘要	大腸癌是和膳食關係最密切的癌症，許多膳食因子可調節大腸癌的形成，透過膳食預防大腸癌爲合理且可行的方向。化學預防是指利用天然物或藥物預防、逆轉或延遲癌症的發展，食品或其成分爲相當熱門的化學預防劑，據統計目前已有百種以上的食品或其成分具有預防大腸癌的潛力。流行病學研究發現全穀類攝取量高者罹患大腸癌的風險較低，觀察大腸癌死亡率與食品攝食量的長期趨勢時亦發現穀類是大腸癌的重要決定因子，但至今以動物模式探討穀類對大腸癌影響的文獻並不多。亞洲國家無論大腸癌的發生率或死亡率均低於歐美國家，此現象與膳食差異有密切關係。米爲眾多亞洲居民的主食，亦爲東西方膳食的主要差異之一，已有研究指出米具有抑制腫瘤的作用，顯示此種穀類對大腸癌之影響爲值得探討的方向。本研究擬探討米對大腸癌之預防作用，首先評估糙米對鼠大腸癌形成過程的影響，接著評估米飯對鼠大腸癌形成過程的影響。本研究有助於瞭解米在大腸癌形成過程所扮演的角色，作爲評估米是否可研發成防癌保健食品或化學預防劑的參考。		
• 英文摘要	Colorectal cancer is the form of cancer most closely associated with diet. Dietary factors play a role in colorectal carcinogenesis, and thus it may be possible to prevent the occurrence of this cancer by dietary modification. Chemoprevention refers to the use of natural or synthetic compounds to prevent, reverse, or delay the development of cancer. Food-derived products are highly interesting for developed as chemopreventive agents, and more than 100 dietary agents have been tested against colorectal cancer. Epidemiological studies have indicated that higher levels of whole grain intake are associated with a decreased risk of colorectal cancer. The secular		

	trend of colorectal cancer incidence and mortality also showed that cereals are an important dietary factor determining the risk of this cancer. However, limited studies have examined the effect of grains against the development of colorectal cancer in animal model. Both the incidence and mortality of colorectal cancer are low in Asian countries and high in Western countries. Rice is the staple food for a large proportion of Asian people, and the consumption of rice is one of the major dietary differences between Asian and Western countries. It has been reported that both rice has an anti-tumor effect, and thus it is valuable to investigate the effect of this grain on colorectal carcinogenesis. This study was designed to investigate the preventive effect of rice against colorectal cancer. The first experiment will evaluate the effect of brown rice on colorectal carcinogenesis in rats. The second experiment will examine the effect of cooked rice on colorectal carcinogenesis in rats. This study will contribute to elucidate the role of rice in colorectal carcinogenesis and to evaluate the development of rice as a health food or a chemopreventive agent.