

## 台糖公司技術移轉/授權成果揭露表

技術名稱(中文)	蟲草素生產製程開發
技術名稱(英文)	Production of cordycepin with <i>Cordyceps militaris</i> (BCRC32219)
目前智財權狀況	■ 營業秘密
中文摘要	<p>蟲草素為腺嘌呤核苷的結構類似物，能抑制枯草桿菌、鳥結核桿菌和艾氏腹水癌細胞，並對KB細胞培養有毒殺作用；蟲草素同時還具有抗真菌、抗HIV-I型病毒和選擇性抑制<i>Clostridium</i> sp. 活性，為一應用性廣的化合物，目前99%純度之蟲草素價格高達新台幣20,000元/g。</p> <p>蟲草素大致由三種途徑取得：天然蟲草分離、人工合成和由人工培養之北蟲草組織或培養液純化。本技術已篩選出菌株、生產模式，培養液之蟲草素濃度約2,000 ppm。</p>
英文摘要	<p>Cordycepin, originated from <i>Cordyceps militaris</i>, is a structure analogous of adenosine, which can inhibit the growth of <i>Bacillus subtilis</i>, bird <i>Mycobacterium tuberculosis</i>, Ehrlich ascites tumor cells, and has been shown to kill KB cell. It also acts as an active compound in activities including anti-fungus, anti-HIV-I virus, and selectively suppressing <i>Clostridium</i> sp. At present the price of 99% purity cordycepin reaches NT\$20,000 per gram. Cordycepin may be prepared by the following three ways: 1. extracting from natural <i>Cordyceps militaris</i>; 2. chemically synthesizing; and 3. by cultivated <i>Cordyceps militaris</i> in solid states or in suspension cultures, then purified from the fruitbodies or the fermentation broth.</p> <p>A isolated strain and cultivation mode for cordycepin production has been developed in our lab. The concentration of cordycepin in harvested broth was gotten approximately 2,000 ppm.</p>
中文關鍵字	蟲草素、北蟲草、生產製程
英文關鍵字	Cordycepin, <i>Cordyceps militaris</i> , production
與現有技術比較之優點(特色)	本技術以液態培養，並純化蟲草素，可作為特用化學品。蟲草素為候選之抗白血病藥物，已進入臨床試驗，未來蟲草素需求勢必大增。至於天然蟲草價格高昂且不易取得，化學合成法起始原料貴，合成率低，且再現性差，總收率太低，難以工業化。因此，本技術有相當之優勢。
產業應用性	醫藥品、保健產品
適用產業類別	醫藥業、生技業
本技術可產生效益(創造產值)	99%純度蟲草素目前市售價格約20,000元/g，且有很強的醫藥適用性，將可產生極高的產值。