國立臺灣大學技術行銷表

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產品/技術名稱	用微核醣核酸預測經治療之癌症患者存活率的方法
發明人/單位	陳璿宇/台灣大學、俞松良/台灣大學、陳健尉/中興大學，張基晟/台中榮民總醫院，陳志毅/台中榮民總醫院，楊泮池/台灣大學
產品/技術說明	微核醣核酸為一類新的小核醣核酸，它可以反向調節基因的功能。為研究影響肺癌存活率之相關微核醣核酸，本研究團隊利用即時反轉錄聚合酶鏈反應技術，分析 174 例非小細胞肺癌患者的微核醣核酸表現量，結果顯示高危險印記的肺癌患者，其存活率明顯地比低危險印記的病人短且復發率高。
應用範圍	可以準確的預測手術後肺癌患者的預後，一方面可以篩選出高危險性的病患，進行積極性的佐劑治療，另一方面，對於低危險性的病患，可以減少不必要的治療，除可以避免治療引起的副作用外，亦可減少醫療資源的浪費。
產品/技術優勢	肺癌預後預測印記可以應用於評估病患預後以及癌症分子病理學的研究或新標靶性治療的開發，並可有助於選擇高風險的癌症病人，在早期即進行輔佐性化療，或給予更進一步的治療。目前仍未有癌症分子生物標記能準確地在臨床上預測病人的存活與復發狀態，包含目前本團隊的研發成果在內，世界上現有技術仍需要進一步進行下一階段大規模前瞻性臨床試驗，才能確認、基因預測模式在臨床應用的可行性。由於本國隊僅利用非常少數的微核醣核酸，即能準確地預測病人存活，上述檢測技術也經過反覆驗證，此特點使得本團隊的研發技術，目前在世界上具些許領先的優勢。
產品/技術智財權保護方式	專利申請中

Marketing Abstract of NTU's Invention Disclosure

Title	Prediction post-treatment survival in cancer patients with micrornas.
Inventor (s)	Hsuan-Yu Chen/National Taiwan University Sung-Liang Yu/National Taiwan University, Jeremy J.W. Chen/National Chung Hsing University, Gee-Chen Chang/Taichung Veterans General Hospital, Chih-yi Chen/Taichung Veterans General Hospital, Pan-Chyr Yang/National Taiwan University
Brief Description	microRNAs are a new class of small non-protein-coding RNAs that function in endogenous negative gene-regulation. We investigated whether microRNA expression profiles can predict clinical outcome of NSCLC patients. Using real-time RT-PCR, we obtained microRNA expressions in 174 NSCLC patients and identified a 5-microRNA signature for the prediction of treatment outcome of NSCLC. Patients with high-risk score of the microRNA signature had poor overall and disease-free survivals compared to the low-risk score patients.
Fields of Application	This 5-microRNA signature can precisely predict the outcome of lung cancer patients. This signature can identify the high-risk patients who should be treated with the more advanced adjuvant therapy. It also can avoid the unnecessary treatment by identifying the low-risk patients.
Advantages	The 5-mcroRNA signature can distinguish high-risk versus low-risk patients within stage subgroups. This finding may potentially enable doctors to identify and select high-risk patients for effective adjuvant therapy in addition to standard surgery in order to improve the treatment outcome of NSCLC. Until now, there are not good enough biomarkers able to predict the survival and relapse of1ung cancer patients. All of the identified lung cancer prognostic biomarkers still need a large scale prospective validation before the clinical application. Our 5-microRNA signature has certain advantage in the world due to the fewest number of microRNAs and twice validation.
IP Right(s)	Patent Pending