



The Chinese University of Hong Kong

Non-confidential Abstract of Technology Disclosure

Title:

Use of a Combination of Genetic Markers to Predict Risk of Diabetic Kidney Disease for Recommendation to Enrol in a Diabetic Kidney Disease Management Program in Chinese Type 2 Diabetic Patients

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Inventor(s):

Professor Chung Ngor Juliana CHAN, Department of Medicine & Therapeutics

Patent Status:

- ◆ Chinese Patent Pending
- ◆ Hong Kong Patent Pending
- ◆ US Patent Pending
- ◆ PCT Application Filed

Non-confidential abstract:

End stage renal failure (ESRD) is a leading cause of death in diabetic patients. There is also epidemiological evidence showing that Chinese diabetic patients have increased risk of developing ESRD. In light of the growing population of diabetic people in China, predicted to increase from the present 18 million to 40 million in 2025, the number of diabetic people with ESRD will also continue to rise with its implications on health care costs, quality of life and societal productivity. There are now proven treatment strategies with particular emphasis on periodic monitoring, treatment to target, adherence to therapy and use of medications to reduce the rate of decline of renal function using a multidisciplinary approach. This form of intensive therapy is most likely to benefit high risk individuals in whom event rates are expected to be high. In this respect, there is now epidemiological and scientific evidence showing that there are genetic predispositions to the development of diabetic kidney disease and that multiple metabolic pathways are implicated in the process. Using cross sectional, case control and prospective analysis, the Chinese University of Hong Kong Diabetes Care and Research Group has confirmed the effects of a number of polymorphism encoding the aldose reductase, angiotensin converting enzyme, angiotensinogen, tumor necrosis factor genes and their interactions on the progression of proteinuria, deterioration of renal function, and development of ESRD in Chinese Type 2 diabetic patients. We claim to use these genetic markers, but not limited to these markers alone, along with other conventional biological markers to assess the risk of a diabetic patient of Chinese descent to develop kidney disease to guide management strategy with an objective to retard the rate of deterioration of renal function and prevent the onset of ESRD.

For further queries, please contact:

Mr Billy Lam
Technology Licensing Coordinator
Tel: (852) 2609 8882
Fax: (852) 2603 5451
Email: billylam@cuhk.edu.hk

Address:
Technology Licensing Office
The Chinese University of Hong Kong
Room 226, Pi Ch'iu Bldg, Shatin, New Territories
Hong Kong SAR