

Bio-markers for Assessing Dementia

Application

Alzheimer's disease (AD) is one of the most common forms of dementia worldwide, accounting for 60–70% of all dementia cases. The hallmarks of AD are deposition of extracellular beta-amyloid ($A\beta$) plaques and intracellular neurofibrillary tangles, which result in progressively declining memory, reasoning, judgment, and locomotion abilities.

An estimated 46.8 million people worldwide are afflicted with AD, but this figure is expected to rise significantly to 100 million by 2050 owing to longer life expectancies and aging populations. There is currently no cure for AD, and its pathophysiology is still relatively unknown.

Technology

Research team in HUKST has developed novel methods to determine if a subject has AD or is at increased risk of developing the disease by means of detecting specific variants in individuals' genomic DNA sequences as well as specific protein markers. A polygenic risk scoring system based on genomic information, further optimized by including information on blood cell counts and plasma protein levels, has also been developed to predict the relative risk of AD.



Talk to Us

Alex Kwong, alexkwong@ust.hk

Head (Biotechnology and Entrepreneurship Support)



Advantages

- Precision medicine for disease monitoring vs drug response
- Early risk assessment

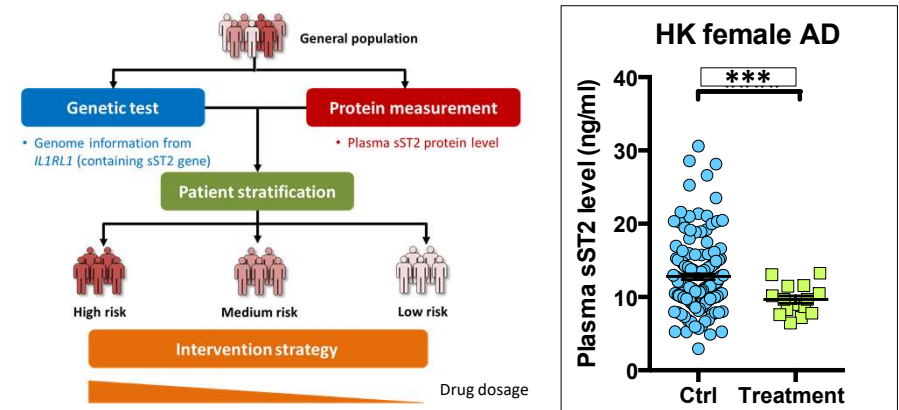


Fig 1. An intervention paradigm to lower the plasma sST2 level for individuals with high plasma level of sST2 and cognitive defects



Intellectual Properties

international Patent Application: PCT/CN2020/111095