

## **A Bioinformatics System for Identifying Independent Markers**

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Some of the major illnesses threaten human health are complicated, involving, many genes and environmental variables. Among these diseases are most sorts of cancer, the causing conditions for heart attack and dementia. Dementia is related to aging, and with the increasing numbers of elderly people in the population, the number of patients with dementia is growing rapidly. The major cause of dementia is Alzheimer's disease (AD). Currently there exists no simple test or biological markers that could detect all early AD cases, and the definite diagnosis of AD is based on histopathological evidence obtained from autopsy. An ideal biomarker should be related to the neuropathological changes. In addition to improve the diagnosis of AD, a biological marker would be valuable in monitoring the progression of the disease and in evaluating the efficacy of therapies.

In this project, we use quantitative studies (correlations) to create a system that will identify markers present in different patients accommodating the same illness. The system, we wish to develop, will interpret information and provide an important precedent, which allows medical personnel to analyze and process the information received from it and hopefully find signs indicating the possibility of disease. The ability to intervene at an early stage is enormously important.