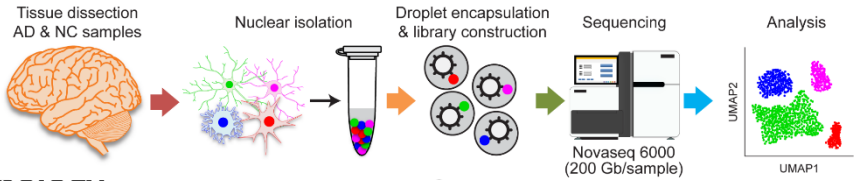
Novel Genes/Molecular Targets for Drug Discovery in AD

Application

Alzheimer's disease (AD) is one of the most common forms of dementia worldwide, accounting for 60–70% of all dementia cases. Currently there are 6 FDA-approved drugs (only symptom-relieving) & ongoing clinical trials candidates are mostly targeting to amyloid and tau.

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 identify over 20 novel genes/molecular pathways that mediate cell-type-specific functional changes in AD patient brain. The biomarkers indicate functional dysregulations in AD (including demyelination & blood vessel abnormalities), potential drug discovery targets to revert these molecular changes and restore brain homeostasis & functions.

Talk to Us

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Advantages

A panel of potential biomarkers and therapeutic targets

- High throughput drug screening (i.e. small molecules)
- Gene therapy (i.e. CRISPR-editing, mRNA vaccine)

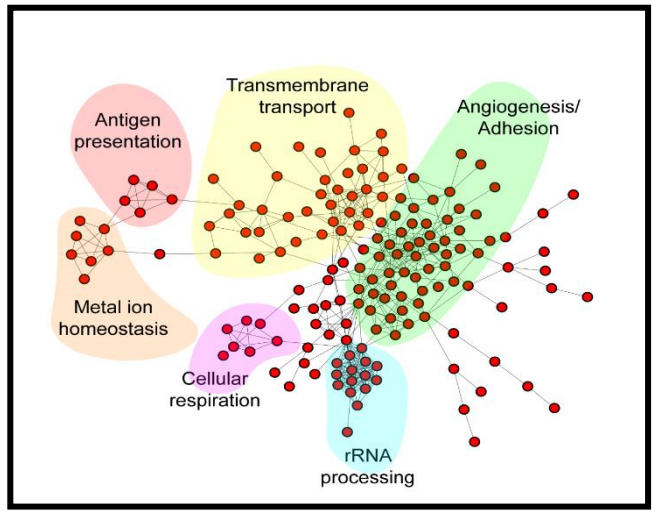

Fig 1 (Left): Single nucleus transcriptome profiling of prefontal cortex in AD patients
Fig 2 (Right): STRING analysis showing the genetic signature of AD-associated endothelial cells with 6 different functional pathways

Intellectual Properties

US Provisional Patent Application: 63/038,049