

The use of plasma biomarkers to improve the diagnosis and disease burden in Alzheimer's disease

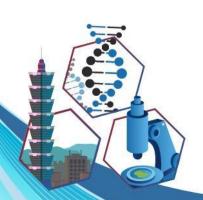
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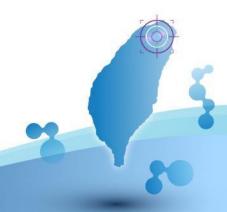
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The lecture will primarily discuss how to use biomarkers in blood to predict the risk of Alzheimer's disease and reduce the need for expensive positron emission tomography (PET) scans.

Alzheimer's disease is a brain disorder that affects memory and cognitive function and is associated with the abnormal accumulation of "amyloid plaques" and "tau proteins." Currently, PET scans are used to detect these protein accumulations, but they are costly and not easily accessible. Researchers aim to use blood tests to replace some PET scans, making screening more convenient.

The lecture will cover the diagnostic criteria of T-ADNI and blood samples from 361 participants, measuring indicators such as p-tau217, p-tau181, and Aβ42/40 (the amyloid protein ratio), and comparing them with PET scan results. The research found that p-tau217 was the most accurate in predicting the risk of Alzheimer's disease, achieving a 94% accuracy rate. Using this data for screening patients could reduce 57.5% of PET scans, saving significant medical resources.





The 8th AAMLS & 2025 8th Congress of Asia Association of Medical Laboratory Scientists The 16th APFMLS Precision, Innovation, and Legacy in Laboratory Medicine

in conjunction with 16th Asia-Pacific Forum of Medical Laboratory Sciences



Additionally, for those already showing amyloid plaque accumulation in PET scans, p-tau217 can help assess tau protein load, which is useful in determining disease progression and selecting vaccine treatment options.

In summary, the speaker will propose a two-step screening process: first, using a blood test for p-tau217 to identify potential Alzheimer's patients, then deciding whether a PET scan is needed. This approach would improve diagnostic efficiency and reduce healthcare costs, holding significant implications for the early diagnosis and treatment of Alzheimer's disease in the future.



