March 22, 2022
Sysmex Corporation

Sysmex Presents Academic Report in Effort to Create a Simple Blood Test to Diagnose Alzheimer's Disease

Sysmex Corporation presented three academic reports aimed at creating a simple method for diagnosing Alzheimer's disease (AD) using blood at the International Conference on Alzheimer's & Parkinson's Diseases (AD/PD™ 2022) held from March 15 to 20 2022 in Barcelona, Spain.

Please refer to the following for details.
Academic Report: https://www.sysmex.co.jp/en/rd/report/index.html

	Presentation title
1	Fully Automated Plasma Beta-Amyloid Immunoassays Predict Amyloid Pathology Defined by Amyloid PET https://www.sysmex.co.jp/en/rd/report/220322_01.pdf
2	Plasma Biomarkers for Classification of AD Pathology by a Fully Automated Immunoassay System (HISCL™ Series) https://www.sysmex.co.jp/en/rd/report/220322_02.pdf
3	The Evaluation of Plasma $A\beta_{1-40}$ And $A\beta_{1-42}$ Immunoassays on The Automated Immunoassay Platform (HISCL™ Series) https://www.sysmex.co.jp/en/rd/report/220322_03.pdf

Reference

It is conceivable that AD is a disease that results in synaptic dysfunction and neuronal cell death due to the tau deposition in neurons triggered by Aβ aggregation on the outside of neurons. These brain changes cause the cognitive impairment and psychological and behavioral symptoms, suggesting that the Aβ aggregation and accumulation inside the brain is caused by AD before the presence of cognitive impairment appears, thus, it is believed that early diagnosis and early intervention is more effective in therapies targeting Aβ. Currently, amyloid PET and the plasma $A\beta_{1-42}/A\beta_{1-40}$ ratio in cerebrospinal fluid (CSF) are used for detecting amyloid aggregates in the brain, but this puts significant burden on patients in terms of access, costs, and their physical wellbeing.[1]

1. Aβ, a peptide consisting of amino acid residues, is generated by excision from the amyloid precursor protein. $A\beta_{1-40}$ consists of 40 residues, is the dominant substance, and does not fluctuate significantly as AD progresses. In contrast, $A\beta_{1-42}$, which consists of 42 residues, has high aggregability and a reduction in $A\beta_{1-42}$ is detected from the early stage of AD. There are individual differences in the absolute value of Aβ as well as intra-individual variabilities, therefore,

it has been reported that there is a high correlation between the $A\beta_{1-42}/A\beta_{1-40}$ ratio in CSF and amyloid PET.
