Poster | Disorders of Nervous Systems and Treatment

[3P]Alzheimer's Disease and Dementia

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*Videos are available throughout the meeting period.

[3P-208]PHP.eb Non-Invasive ApoE2 AAV Vector into APP/Psen Alzheimer Model Mice

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PHP.eB Non-Invasive ApoE2 AAV Vector into APP/Psen Alzheimer Model Mice

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Alzheimer Disease (AD) occupies 70~80% of dementia and shows neuroinflammation in the brain. In this study, we carried out PHP.eB non-invasive ApoE2 Adeno Associated Virus (AAV) vector into APP/Psen Alzheimer model mice. PHP.eB is the designed- serotype of AAV that can penetrate into the blood-brain barrier after intravenous injection. ApoE2 is one of the Apolipoprotein E allele which compensates the detrimental effect of a risk allele of ApoE4. In this research, we utilized ApoE4 Knock-in (KI) APP/PS1 mice and conducted memory as well as histochemical evaluations. We also used APP/PS1 mice as a reference. Morris Water Maze (MWM) is the behavioral test that evaluates spatial learning and memory. Immunostaining was conducted at cerebral cortex, hippocampus and prefrontal cortex of ApoE4 KI-APP/PS1 mice which had been injected with PHP.eB AAV-ApoE2 or AAV-GFP. As a result, we observed a tendency of functional recovery as well as suppression of neuroinflammation in ApoE4 KI-APP/PS1 with PHP.eB AAV-ApoE2 gene therapy.

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