

Expression of ACSS2 Genes in Peripheral Blood Mononuclear Cells of Patients with Alzheimer's Disease

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Abstract : The impairment of lipid metabolism in the central nervous system has been suggested as a critical factor of Alzheimer's disease (AD) pathogenesis. Homo sapiens acyl-coenzyme A synthetase short-chain family member 2 (ACSS2) gene encodes the enzyme acetyl-Coenzyme A synthetase (AMP forming; AceCS) providing acetyl-coenzyme A (Ac-CoA) for various physiological processes, such as cholesterol and fatty acid synthesis, as well as the citric acid cycle. We investigated ACSS2, transcript variant 1 (ACSS2*1), mRNA levels in the peripheral blood mononuclear cells (PBMC) of patients with AD and compared them with the controls. The study group comprised 50 patients with the diagnosis of AD who have applied to Gaziantep University Faculty of Medicine, and Department of Neurology. 49 healthy individuals without any neurodegenerative disease are included as controls. ACSS2 mRNA expression in PBMC of AD/control patients was 0.495 (95% confidence interval: 0.410-0.598), $p = .00000001902$). Further studies are needed to better clarify this association.

Keywords : Alzheimer's disease, ACSS2 Genes, mRNA expression, RT-PCR

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