# P-717 - THROMBIN INHIBITORS IN ALZHEIMER'S DISEASE

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Alzheimer's disease (AD) is a disorder characterized by progressive cognitive decline and dementia. Actually, no disease-modifying drug exists. Based on some evidence, it has been postulated that neurovascular damage is one important inaugurating event of a subsequent cascade and that secondary injuries including β-amyloid deposition may exacerbate vascular damage leading to neurodegeneration and ultimately cognitive decline. Neurovascular damage is the result of the presence of cardio-vascular risk factors activating the endothelial cells of the brain microvasculature. This endothelial activation could lead to a secretion of many pro-inflammatory cytokines and growth factors such as thrombin. The latter seems to play a major role in the initiation and perpetuation of neurovascular damage via its pro-inflammatory and pro-coagulant effect. Indirect thrombin inhibitors such as heparin and related oligosaccharides have been shown to be efficient in the improvement of symptoms of AD. Their efficacy may be limited by their non-selective inhibitory effect of thrombin activity. Many direct thrombin inhibitors are commercialized. Of those dabigatran is the only one that exists in an oral form of administration. Dabigatran's safe side effect profile and high selectivity for thrombin's activity inhibition render it an eligible, though yet unexplored, efficient treatment for patients suffering from AD.



https://doi.org/10.1016/S0924-9338(12)74884-8 Published online by Cambridge University Press