

“The role of leptin in Alzheimer’s disease”

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Cognitive deficits are the major manifestation of Alzheimer’s disease (AD); however, weight loss can precede the mental decline and correlates with disease severity. Thus, brain circuits controlling body weight may be altered early in AD and could be intrinsic to AD pathobiology. In mouse models, we found that amyloid-beta, a major pathogenic factor in AD, could inhibit hypothalamic neurons in the leptin pathway, which was associated with early body weight/metabolic deficits.

Ongoing research seeks to elucidate the mechanisms underlying the body weight/metabolic deficits and hypothalamic dysfunction in AD using both mouse models and clinically relevant human studies.