Title: AMPK induced memory improvements in the diabetic population: A Case Study

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AMPK induced memory improvements in the diabetic population: A Case Study

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Abstract

Diabetics in mid-life carry a 1.5 times higher risk of developing Alzheimer's disease than those diagnosed with diabetes (T2D) later in life (Ronnemaa et al., 2008). Recent research points to accelerated cognitive decline within a range of 20%-50% for middle-aged diabetics as compared to non-diabetic populations (Feinkohl et al, 2015; Winkler et al., 2014). Metabolic syndrome (MetS), a type 2 diabetes (T2D) precursor, is also linked to MCI and AD pathologies via hypo-metabolic brain circuitry that inhibits glucose metabolism and attenuates cognitive function (Gibas, 2017). Dysregulation of intracellular and extracellular signaling as mediated by the mTOR and AMPK pathways is the result. These critical nutrient sensing pathways modulate