RNA-demethylase FTO in the regulation of cognitive function and brain energy homeostasis: a novel pharmacological target in Alzheimer’s disease

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RNA-demethylase FTO in the regulation of cognitive function and brain energy homeostasis: a novel pharmacological target in Alzheimer's disease

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Research Abstract
Despite the advancements in healthcare, the prevalence of neurodegenerative disorders including Alzheimer’s disease is steadily increasing. A major obstacle in identifying effective therapies is our lack of understanding of the early steps in etiology of these disorders. However,

evidence is accumulating that impaired brain bioenergetics is at core of those early events. A better understanding of the links between metabolic and cognitive dys/function is therefore critically needed. RNA-demethylase FTO, an enzyme involved in a novel epigenetic mechanism and associated with metabolic and neurological disorders, has been identified as one such link. To better understand FTO regulatory action, we will utilize a newly synthetized FTO-inhibitor to probe its role in cognitive function, maintenance of brain energy homeostasis and progression of Alzheimer's neuropathology. Towards this goal, we will use advanced behavioral, imaging, biochemical and cell culture techniques. Our findings will dramatically advance our understanding of the links between brain bioenergetics and cognitive function.

Further information available at:

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