Poster Presentation

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Novel Dual-binding Cation-pi Inhibitors of Acetylcholinesterase

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The characteristic dual binding of Acetylcholinesterase (AChE) inhibitors and discovery of predominant cation-pi interactions responsible for high affinity has led to the design of new potent inhibitors for AChE. We report new scaffolds as AChE inhibitors, which tightly bind to enzyme, via hydrophobic interactions flanked by cation-pi interactions. These compounds indicate activity in nanomolar ranges in bioassays. MTT cytotoxic assays performed on prevalent neuronal cell lines (SK-N-SH) suggest no toxicity up to 0.6 nM. These new scaffolds for AChE serves as an alternate solution for ongoing symptomatic treatment for Alzheimer disorder.

Keywords: Acetylcholinesterase inhibitor, Alzheimer