N-substituted-piperidines as novel anti-alzheimer agents: Synthesis, antioxidant activity, and molecular docking study

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Abstract

Design, synthesis and evaluation of new acetylcholinesterase inhibitors by combining carbamoylpiperidine analogs containing nipecotic acid scaffold were described. Then, a series of hybrids have been developed by introducing Free radical scavengers. Molecular modeling was performed and structure activity relationships are discussed. Among the series, most potent compounds showed effective AchE inhibitions, high selectivity over butyrylcholinesterase and high radical scavenging activities. On the basis of this work, the ability of analogs containing nipecotic acid scaffold to serve in the design of N-benzyl-piperidine linked multipotent molecules for the treatment of Alzheimer Disease.

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