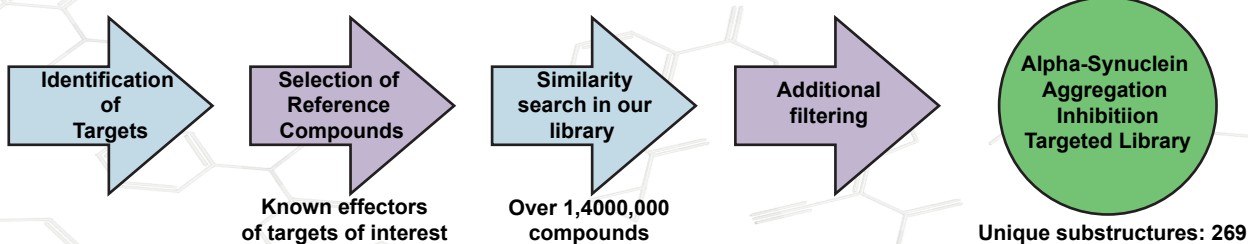


ASAIMARK

Alpha-Synuclein Aggregation Inhibition Targeted Library

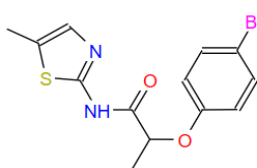
The aggregation of alpha-synuclein into toxic oligomers and insoluble fibrils is the defining pathological hallmark of Parkinson's disease and other synucleinopathies. These aggregates disrupt cellular homeostasis, impair mitochondrial function, and propagate from cell to cell, driving progressive neurodegeneration. Searching for small molecules that could inhibit alpha-synuclein aggregation represent a promising disease-modifying strategy. Such inhibitors could halt the spread of pathology, preserve dopaminergic neurons, and slow cognitive decline. The urgent need for effective treatments is underscored by the rising global burden of Parkinson's disease and the lack of any approved aggregation inhibitor. Developing novel small molecules capable of crossing the blood-brain barrier and selectively targeting pathogenic aggregation could transform patient outcomes, addressing the root cause of these devastating disorders.



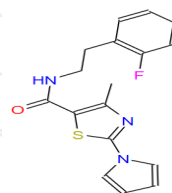
Targeted process:

Alpha-Synuclein Aggregation

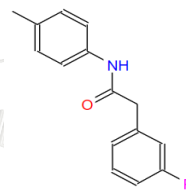
Example compounds



STK486775



STK717928



STL066025

The Alpha-Synuclein Aggregation Inhibition Targeted Library (ASAIMARK) is a collection of 354 rule-of-five compliant compounds, specifically designed to target Alpha-Synuclein Aggregation Process. Each compound was selected based on structural similarity to known potential inhibitors of aggregation process. The library prioritizes broad structural diversity and optimal drug-like properties, including BBB score of 2 or higher, while filtering out compounds with undesirable motifs or potential toxicity. ASAIMARK provides a robust foundation for high-throughput screening, offering a source of novel chemical starting points for search of new Parkinson's disease therapeutics.

Distribution of Parameters

