

Dihydroquinazoline-Derived Inhibitors for Alzheimer's Disease Treatment

Novel, high-potency dihydroquinazoline derivatives have been developed to inhibit beta-secretase, showing improved solubility and oral bioavailability for potential Alzheimer's disease treatment.

Alzheimer's disease is a progressive mental deterioration, resulting in loss of memory, confusion and disorientation, and other behavioral problems. Unfortunately, no definitive cure has been developed to treat this disease. Beta-secretase, an important enzyme in the development and onset of Alzheimer's disease, contributes to the formation of amyloid-beta peptides that aggregate in the brain of Alzheimer's patients. Blocking beta-secretase is a potential strategy for the treatment of Alzheimer's disease.

Researchers at Purdue University have developed novel compounds that inhibit beta-secretase for Alzheimer's treatment. By focusing on a known dihydroquinazoline scaffold, a series of novel dihydroquinazoline derivatives were synthesized and evaluated. Several compounds in this series were shown to exhibit better beta-secretase cellular inhibitory activity compared to current compounds reported in literature. These compounds show increased potency, improved aqueous solubility, increased metabolic stability, and improved oral bioavailability.

Advantages:

- Improved beta-secretase cellular inhibition
- Increased metabolic stability

Potential Applications:

- Medical/Health
- Pharmaceutical industry

TRL: 2

Intellectual Property:

Technology ID

65219

Category

Pharmaceuticals/Drug Delivery & Formulations

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