

# Novel Peptide Inhibitors for Alzheimer's disease

## Notch-Sparing Modulation of $\gamma$ -Secretase by Three-Finger Toxins

### Overview

Amyloid- $\beta$  (A $\beta$ ) accumulation is a key driver of Alzheimer's disease (AD). While  $\gamma$ -secretase inhibitors (GSIs) have long been pursued as therapeutics, safety issues have prevented their clinical adoption.

Using AlphaFold2-based in-silico screening, the inventors discovered that Three-Finger Toxins (3FTXs)—disulfide-rich peptides from snake venom—potently block  $\gamma$ -secretase-mediated APP processing. Strong inhibitory activity was confirmed in both yeast-based assays and a  $\beta$ -galactosidase reporter system.

Brain-targeted AAV vectors for 3FTX expression are currently under development, with evaluation in AD model mice planned. Acting at sites distinct from traditional GSIs, 3FTXs offer a novel and promising approach for AD prevention and treatment.

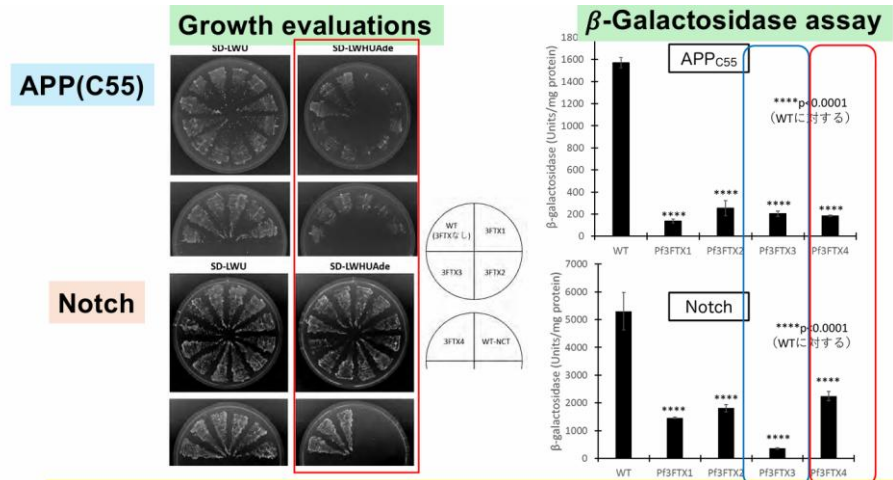
### Product Application

- Therapeutic and preventive agents for Alzheimer's disease
- Potential disease-modifying therapy targeting APP processing

### IP Data

IP No. : WO2024/004231  
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### 3FTXs Exhibit Strong $\gamma$ -Secretase Inhibitory Activity



3FTXs potently inhibit  $\gamma$ -secretase-mediated APP processing while largely sparing Notch.

→ **A first-in-class, Notch-sparing  $\gamma$ -secretase inhibitor series with strong potential as a safe and effective disease-modifying therapy for Alzheimer's disease.**

### Contact

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