Alzheimer’s disease and related dementias

No existing disease-modifying treatments

CV-01: Our First-Generation,
Brain Penetrant
Small Molecule
for Neurodegenerative Diseases

6.7 million
People in the US living with Alzheimer’s disease and related dementias

$1 trillion
In annual US healthcare costs by 2050 from Alzheimer’s disease and related dementias

55 million
People worldwide living with Alzheimer’s disease and related dementias

National Institute of Neurological Disorders and Stroke and Alzheimer's Association 2024

Tau is a pathological hallmark for Alzheimer's disease and related dementias

Alzheimer's disease is characterized by two major pathological hallmarks:

Senile Plaques (SPs)

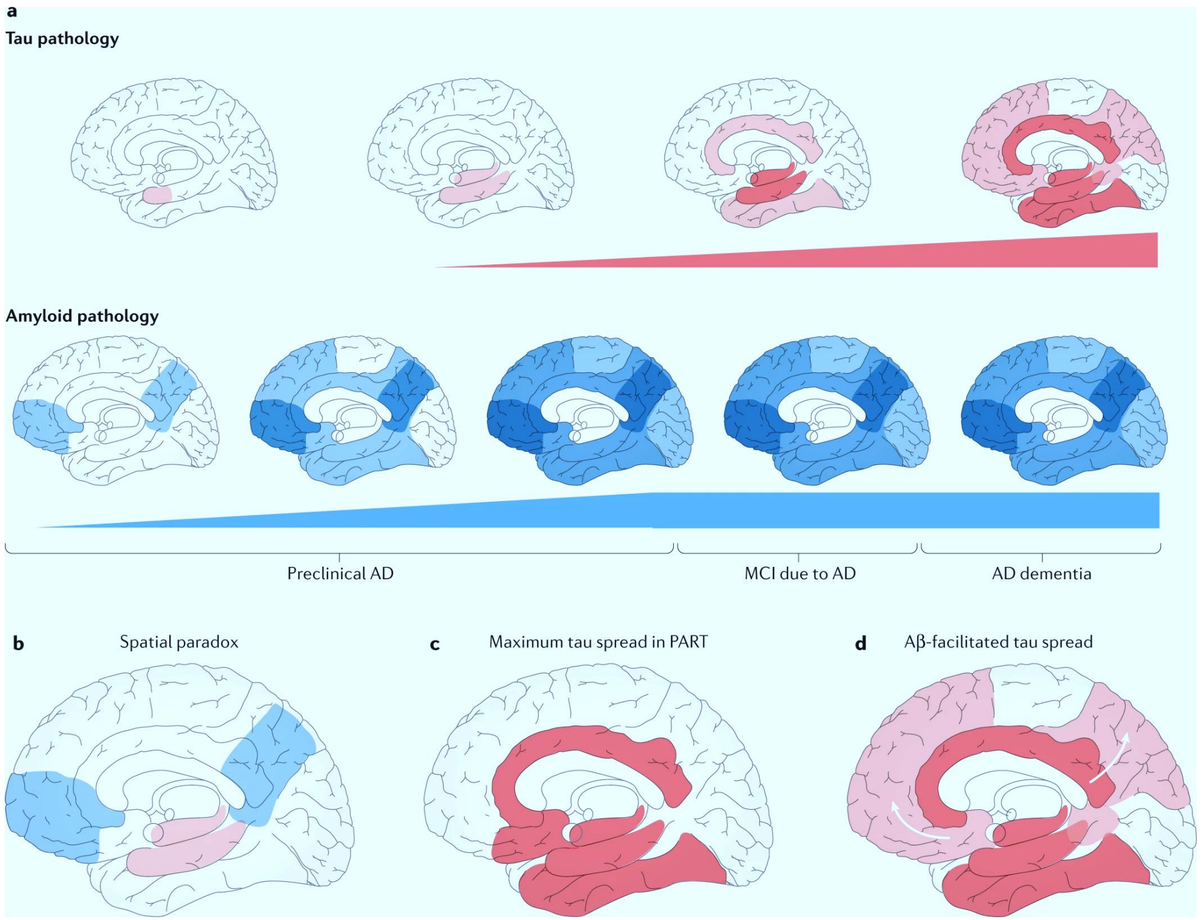
- SPs are extracellular lesions made up of bundles of amyloid-β (Aβ) peptide fibrils

Neurofibrillary Tangles (NFTs)

- NFTs are intracellular aggregates composed of the hyperphosphorylated form of the microtubule-associated protein Tau
- NFTs are more closely associated with cognitive impairment severity than SPs in AD.

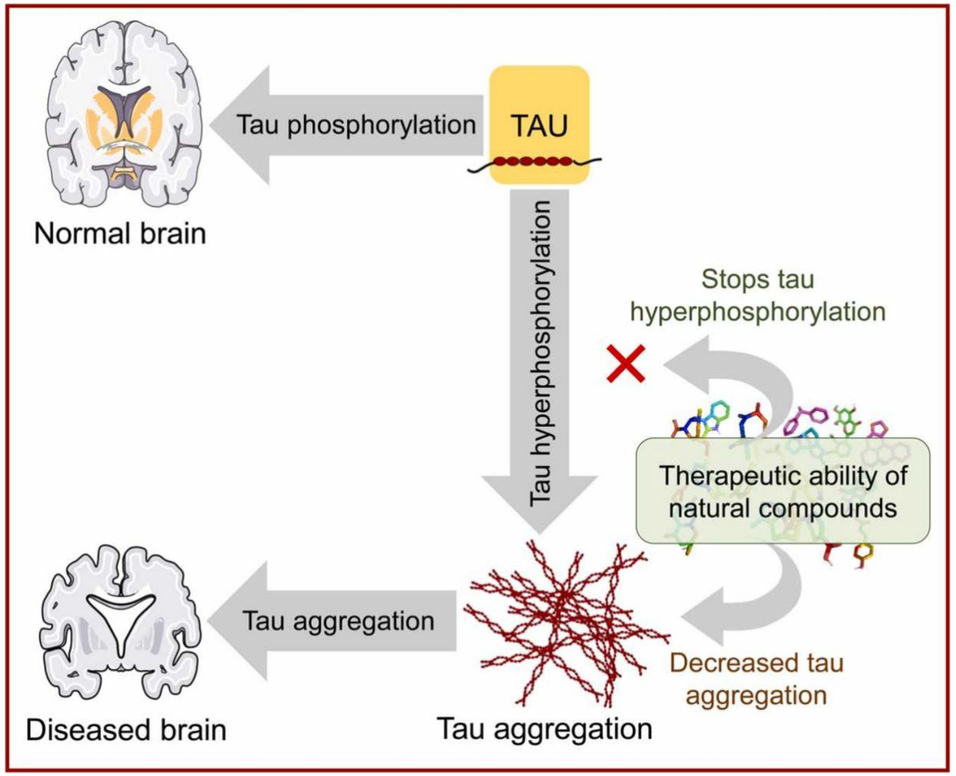
Tau protein has also been implicated in mediating Aβ toxicity.

➢ CV-01 allows to address Tau-mediated formation of NFTs



van der Kant, R., Goldstein, L.S.B. & Ossenkoppele, R. Amyloid-β-independent regulators of tau pathology in Alzheimer disease. Nat Rev Neurosci 21, 21–35 (2020). https://doi.org/10.1038/s41583-019-0240-3.

Targeting Tau-hyperphosphorylation and aggregation



Khan S, Hassan MI, Shahid M, Islam A. Nature's toolbox against tau aggregation: An updated review of current research. Ageing Res Rev. ;87:101924 (2023). doi: 10.1016/j.arr.2023.101924.

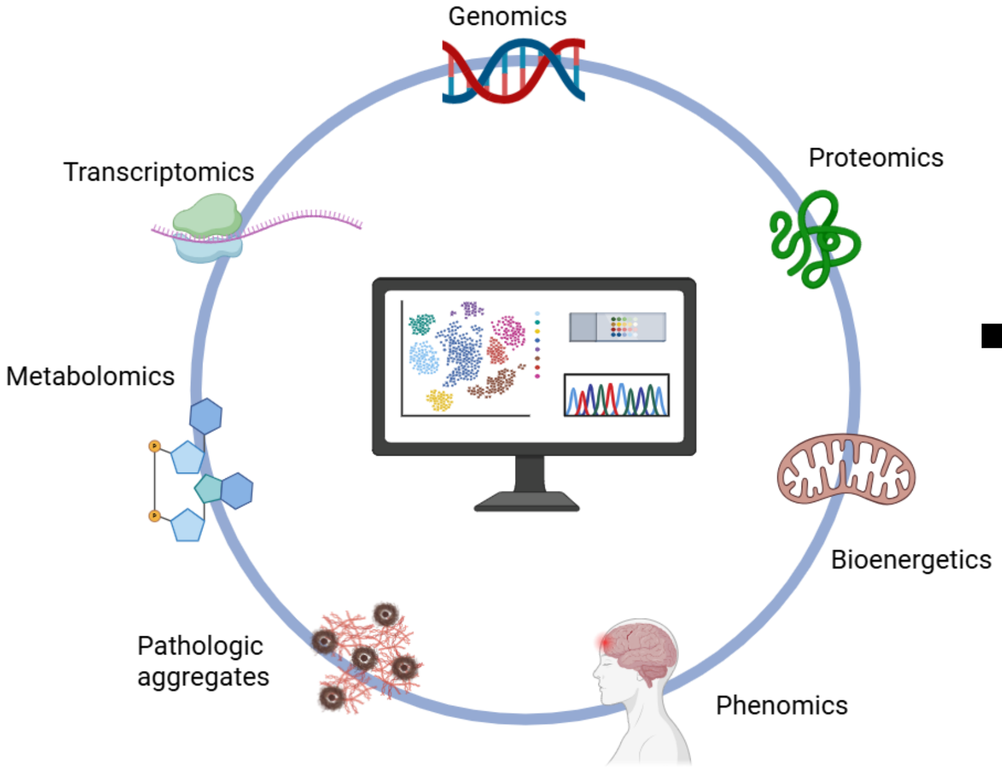
Tau-protein relies on proper phosphorylation for its functioning.

Hyperphosphorylation leads to the aggregation of Tau-fibers

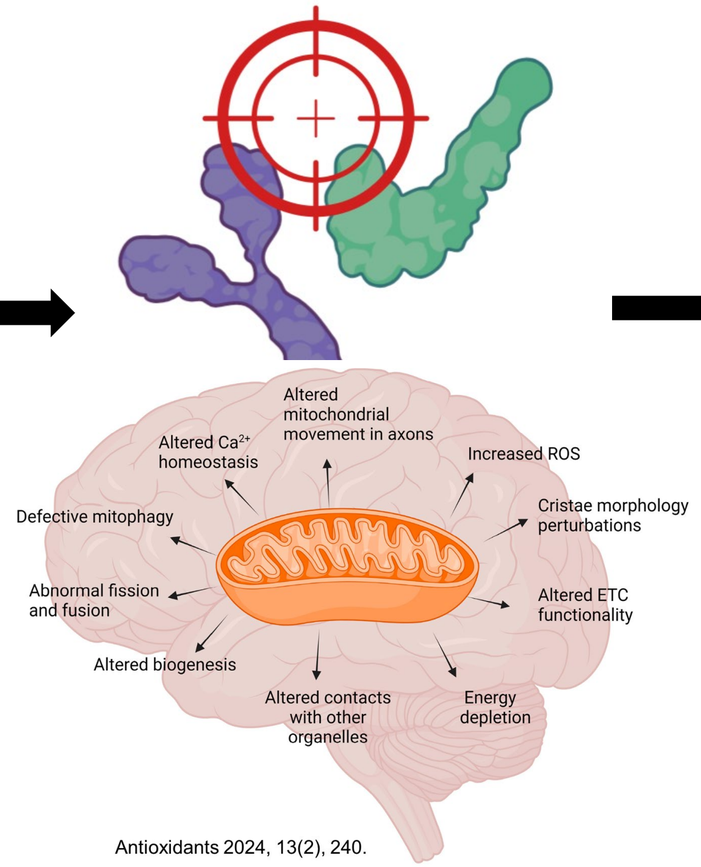
Natural compounds have shown to modulate and reduce Tau hyperphosphorylation and aggregation.

Our Solution: Small molecules targeting an Alzheimer's risk gene associated with Tau pathology

State of the Art Data Science

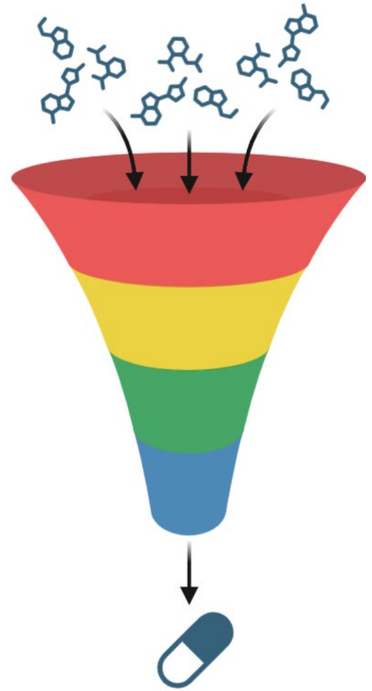


Novel Drug Target Hypothesis



Antioxidants 2024, 13(2), 240.

In Silico and In Vitro Screening



CV-01

CV-01 Compound Profile: Potent, selective, orally bioavailable, safe, and ready for clinical advancement

🧬 Drug Target Engagement

- High-affinity binding to target confirmed by **SPR** (ongoing DARTS).
- Selectively engages **mitochondrial target.**
- Functional assays confirm **mechanism of action.**
- **No off-target activity** in functional and gene expression profiling.

💊 Drug-like Properties

- **Orally bioavailable** with favorable PK profile.
- **High Caco-2 permeability.**
- **Not a P-glycoprotein substrate.**

🛡️ Safety & Tolerability Panel

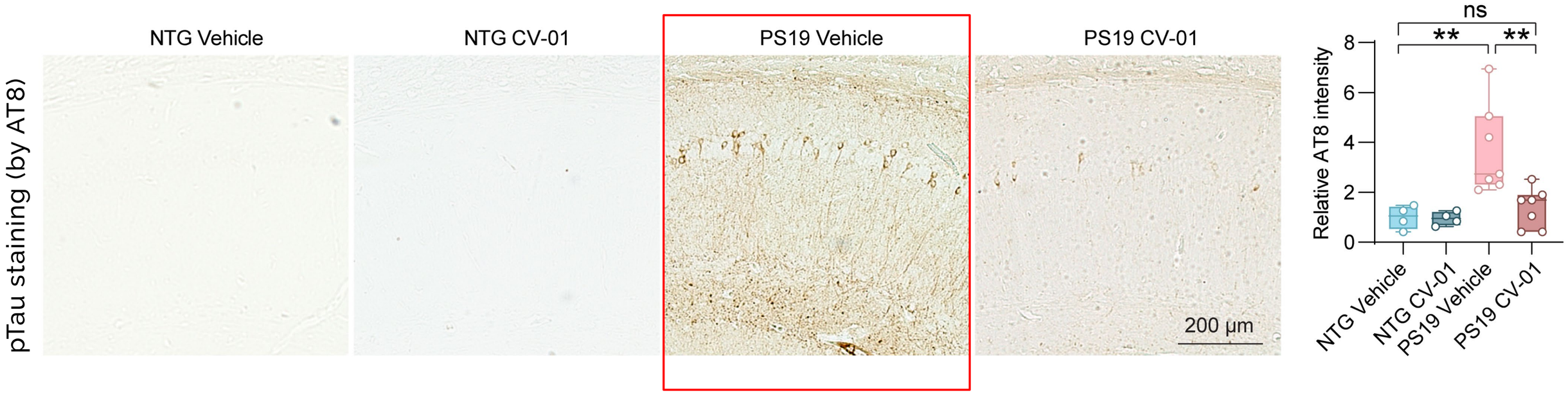
- **No cytotoxicity** in multiple cell lines.
- Well-tolerated in rodents:
  - Stable body weight and food intake.
  - No organ toxicity in histopathology even at **2000mg/kg**.

🏭 Development Readiness

- **Scalable synthesis** with high purity and yield.
- Compatible with both oral and parenteral formulations.
- **Chemically stable** at room temperature.

Superior Efficacy Profile: Near-complete clearance of tau pathology by CV-01

CV-01 abolishes pathological Tau aggregation



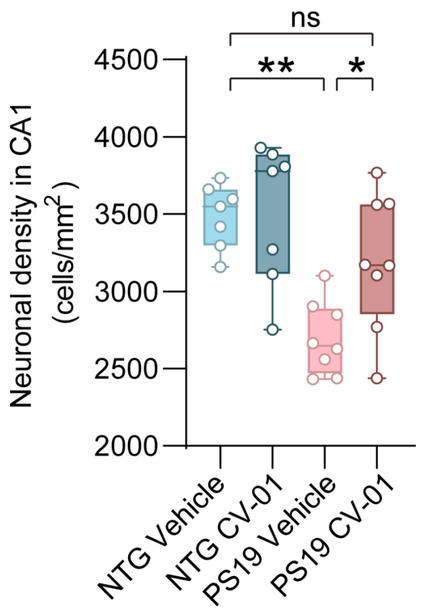
NTG: non-transgenic control mice; PS19: transgenic mice expressing mutant tau

CV-01 abolishes insoluble Tau **(aggregated pathogenic Tau)** in PS19 mice

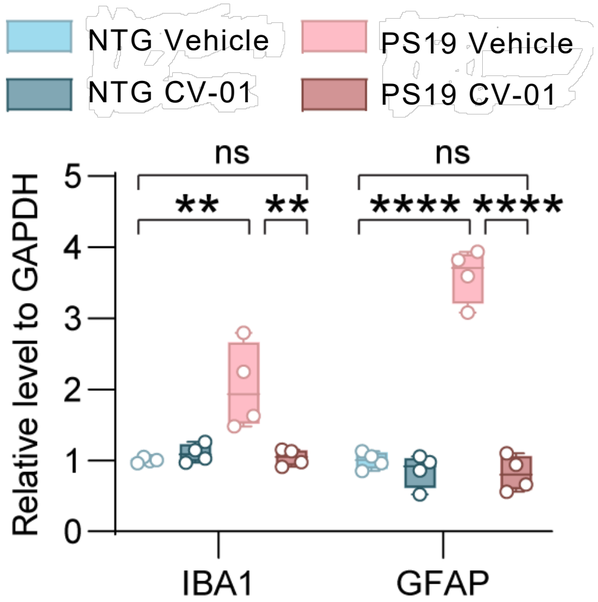
CV-01 effectively reduced phosphorylated Tau in PS19 mice and abolished aggregated Tau

Superior Efficacy Profile: Complete restoration of neurons and cognitive function by CV-01

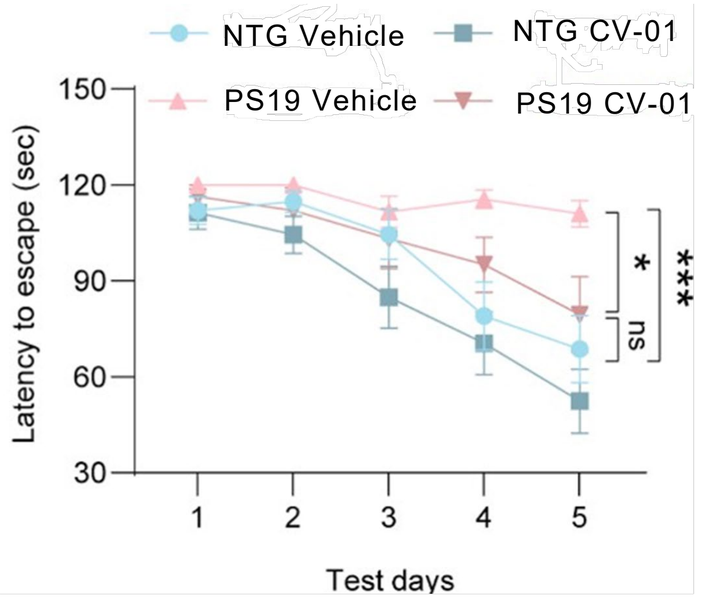
CV-01 abolishes neuronal death



CV-01 fully inhibits microgliosis & astrogliosis



CV-01 fully restores brain function (by Barnes maze)



NTG: non-transgenic control mice; PS19: transgenic mice expressing mutant tau

CV-01 maintains neuronal density as seen in WT mice.

CV-01 abolishes neuronal cell death & restores neuronal survival and cognitive function to WT levels.

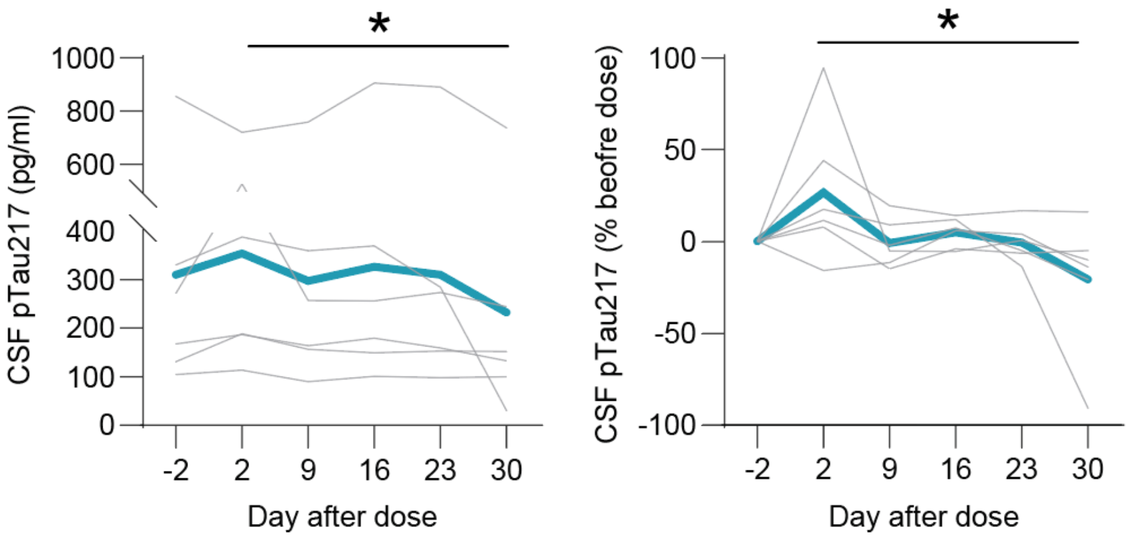
IBA-1 and GFAP, markers for microglia and astrocytes, respectively, indicate neuroinflammation and predict neuronal damage.

CV-01 entirely suppresses neuroinflammation to levels seen in WT mice.

Biomarker Response in Nonhuman Primates: Significant reduction of CSF pTau217 after 1-month treatment in aged monkeys

CV-01 reduces CSF pTau217

Cynomolgus monkeys （22-25yr old, male, *n* = 6; 20 mg/kg twice weekly;）



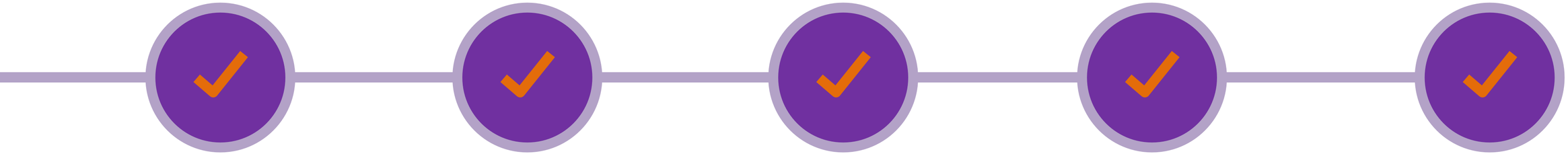
- **Robust reduction** of CSF pTau217 in aged male cynomolgus monkeys.
- **Clinically relevant model**: aged non-human primates closely replicate human brain aging.
- **pTau217 is a gold-standard biomarker**: highly specific and sensitive for Alzheimer's disease and related dementias progression.
- **Supports disease-modifying potential:** targets a core driver of tauopathy, not just symptoms.
- **High translational probability:** biomarker change in NHPs strongly predicts human clinical response.
- **Well-tolerated in aged subjects** : favorable safety profile observed alongside efficacy.
- **Positions CV-01 as first-in-class**: candidate addressing tau pathology in aging brains.
- **Strengthens rationale for clinical advancement**: compelling preclinical efficacy in a model most predictive of human outcomes.

CV-01 significantly reduces CSF pTau217 after one month treatment

p-Tau217 is a highly specific and reliable biomarker for Alzheimer's disease. It has shown strong correlations with amyloid and tau pathology, even at early disease stages, and is detectable in CSF and blood. p-Tau217 outperforms other tau biomarkers, such as p-Tau181.

CV-01 Demonstrates Exceptional Efficacy in Key Measures of Neurodegenerative Disease

Neurodegenerative diseases exhibit several key hallmarks – CV-01 effectively modifies disease course



Completely suppresses Neuroinflammation

Abolishes Neuronal Cell Death

Fully improves Cognition

Excellent Toxicology Profile

Promising biomarker response in nonhuman primates

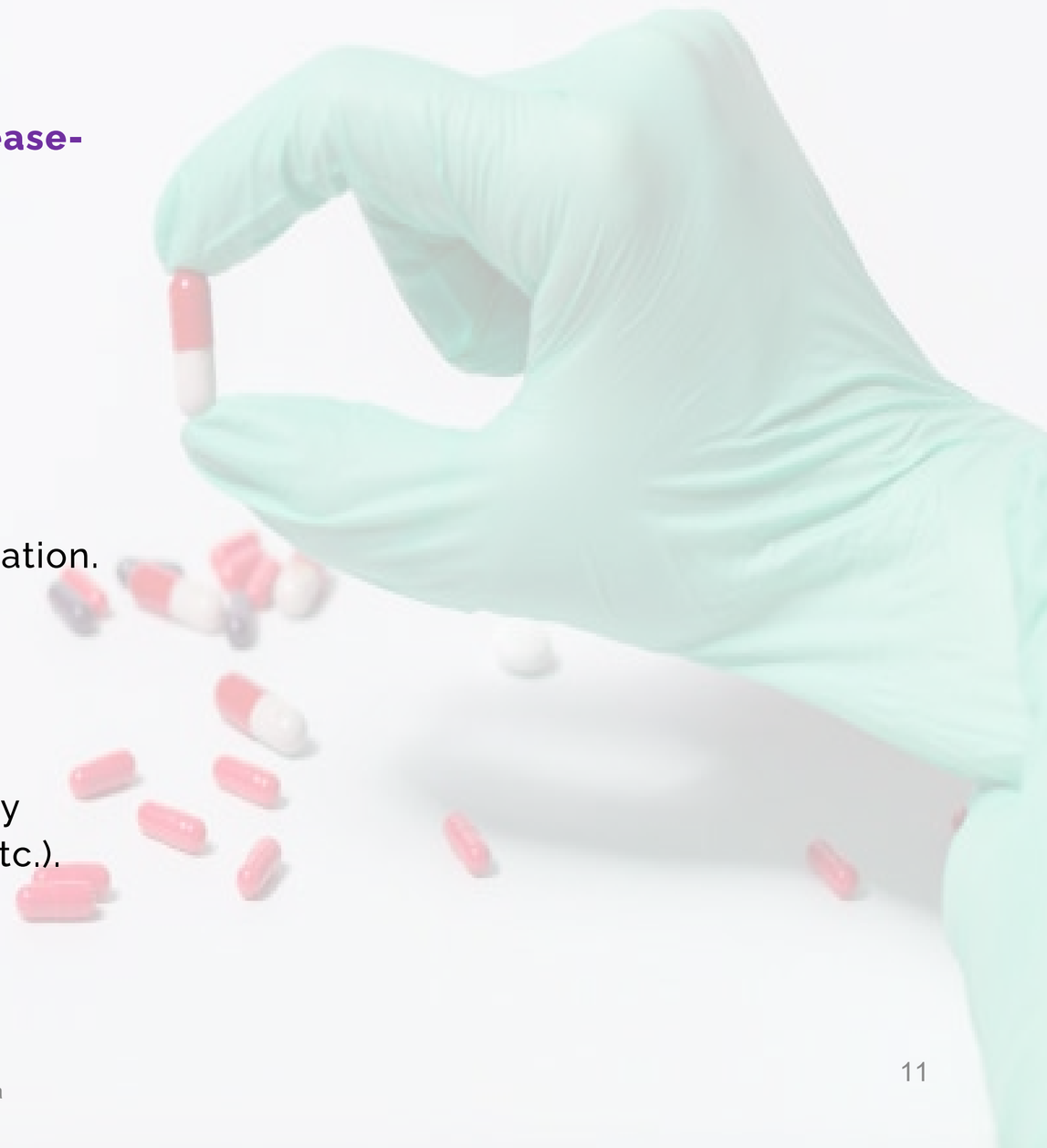
Significant Pipeline Optionality with Multiple Assets Ready to Complete IND-Enabling Studies for Clinical Trials

TARGET	CANDIDATE	INDICATION	DISCOVERY	PRECLINICAL	IND-ENABLING
Undisclosed (small molecule)	CV-01	Frontotemporal Dementia		Tau P301S mice	Mouse, rat and monkey PK completed; Monkey CSF tau completed; 2Q25: Monkey CSF and blood Nfl/GFAP;
Undisclosed (small molecule)	CV-01	Alzheimer's Disease		Tau P301S mice	Mouse, rat and monkey PK completed; 2Q25: Monkey CSF and blood Aβ;
Undisclosed (small molecule)	CV-01	Amyotrophic lateral sclerosis		SOD1G93A mice	Mouse, rat and monkey PK completed; 2Q25: Monkey CSF and blood TDP-43;
Undisclosed (small molecule)	CV-01	Parkinson's disease		MPTP toxin model	Mouse, rat and monkey PK completed; 2Q25: Monkey CSF and blood α-synuclein;

Executive Summary

CV-01 is a potent and safe small molecule engaging disease-associated mitochondrial target for neurodegeneration.

- In Tauopathy disease models, CV-01:
  - Clears clinically relevant, aggregated, pathogenic Tau by 80-100% (cause of disease).
  - Spares normal/healthy Tau.
  - Remarkably suppresses neuronal death and neuroinflammation.
  - Fully restores cognitive function.
- Compared to competitors, CV-01 demonstrates robust and superior disease modifying effect.
- CV-01 has potential in many other indications characterized by mitochondria/bioenergy dysfunction (i.e., obesity, diabetes, etc.).



Next Steps

We are seeking $0.5-1M in seed financing for the completion of IND-enabling studies.

Our preclinical data and some IND-enabling studies generated thus far has shown clear efficacy and safety as a candidate for various neurodegenerative diseases and metabolic diseases.

- Proceeds will be used for:
  - Multi-species toxicology, PK/PD data, and other IND-enabling work.
  - Optimization work (if needed).
  - Key hires.

Key Data Milestones

2Q25: More monkey biomarker data

2Q25: Efficacy data in PD toxin models

4Q25: Dose response data in animals

4Q25/2Q26 Efficacy in more ALS/PD genetic model

XINGLONG WANG, PHD

Scientific Founder

THANK YOU