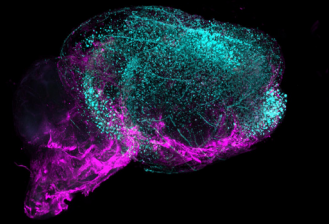
Alzheimer's Disease Mouse Models for Drug Discovery & Therapeutic Research

Taconic offers state-of-the-art Alzheimer's disease models that enhance our scientific understanding of disease progression and advance drug discovery efforts.

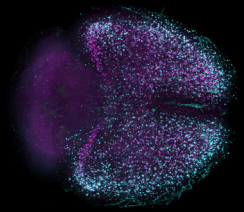
FEATURED MODEL: ARTE10 (APP-PS1) ALZHEIMER'S MOUSE MODEL

The **ARTE10 (APP-PS1) transgenic mouse** model is a robust and highly translational tool for advancing Alzheimer's disease research. Engineered on a C57BL/6 (B6) background, this model co-expresses human APP with the Swedish mutation and PSEN1 with the M146V mutation under the Thy1 promoter, leading to early and abundant β-amyloid plaque formation.

With predictable onset and progression of amyloid pathology, low inter-animal variability, and high penetrance, ARTE10 is ideal for evaluating amyloid-targeting therapies and imaging agents. Whether you're investigating disease mechanisms or testing therapeutic interventions, the ARTE10 model offers the consistency and clinical relevance essential for nonclinical Alzheimer's research.



(Top) Sagittal view of whole-brain imaging of β-amyloid (cyan) and astrocytes (GFAP, magenta) in ARTE10 mice.



(Bottom) Horizontal view of whole-brain imaging of β-amyloid (cyan) and microglia (IBA1, magenta) in ARTE10 mice.

Images generated in collaboration with LifeCanvas Technologies

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Collaboration with Transpharmation Unveils Timeline of Alzheimer's Biomarkers in the ARTE10 (APP-PS1) Mouse Model

Summary of behavioral phenotype in ARTE10 Alzheimer's mouse model

		ARTE10 Effect		
Indication	**Test**	**5 months of age**	**10 months of age**	**Significance**
Anxiety	Canopy Test	↑	↑↑	Increased anxiety-like behavior
Motivation/Mood	Nest Building	↓	↓	Decreased motivation/mood (increased latency to nest and lower nest scores)
Sensory Motor Gating	PPI	↓	↓	Deficits in sensory motor gating (reduced pre-pulse inhibition)
Activity/Locomotion	LMA	↓	↓	Hypolocomotion
Motor Function	Rotarod	NS	NS	No motor impairments
Activity	Running Wheel	↑	↑	Hyperactive
Learning	MWM*	↓	↓	Spatial working memory deficit
Memory	MWM* Y-Maze	NS NS	↓ ↓	Impaired working memory by 10 months

***MWM:** Morris Water Maze, PPI: Pre-pulse inhibition, LMA: Locomotor Activity, NS: not significant.

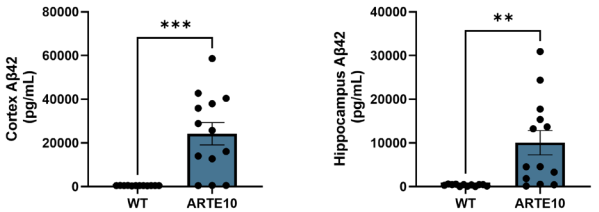

Figure1. Quantification of Aβ42 in brain regions from 5 month-old wildtype and ARTE10 mice.

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Transpharmation
Science that translates into results

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