Mouse Models MSA/OPCA Publication

MBP-?-Syn transgenic mouse

IDENTIFICATION

Causal gene(s)	Sporadic
Repeat size or mutation	human ?-synuclein cDNA
Animal model	Mouse

MODEL DETAILS

Mouse strain / background	C57BL/6 × DBA/2 F1
Type of model	Transgenic

TRANSGENIC CONSTRUCT

Transgenic construct: sequence type	cDNA
Transgenic construct: details	Human ?-syn cDNA fragments were ligated with the 5? upstream region of the MBP cassette; the splice and the polyadenylation signals were supplied by portions of the PLP gene (exon 6, intron 6, exon 7).
Promoter: gene	MBP
Promoter: species	Mouse

PHENOTYPE

Progression	Progressive
Hallmark features	Premature death, accumulation of ?-synuclein inlcusions, astrogliosis, myelin pallor, decreased neurofilament, decreased dendritic density, loss of doparminergic fibers

SOURCE & PUBLICATIONS

Originating lab / institution	University of California
Links to publications or public resources	Neurological and neurodegenerative alterations in a transgenic mouse model expressing human alpha-synuclein under oligodendrocyte promoter: implications for multiple system atrophy - PubMed https://pubmed.ncbi.nlm.nih.gov/16291942/