MS Models

*In vivo* models to progress your MS inflammation agents to the clinic

Advance your multiple sclerosis agents through the drug development process with our preclinical inflammation platform. Utilize well-validated models, including the MOG-EAE model which closely represents the human condition.

- Select preclinical models with diverse mechanisms that capture many of the key characteristic clinical and pathologic features of MS including:
  - myelin oligodendrocyte glycoprotein-induced experimental autoimmune encephalomyelitis (MOG-EAE) model
  - proteolipid protein-induced experimental autoimmune encephalomyelitis (PLP-EAE) relapsing-remitting model coming soon.
- Determine efficacy and response to treatment.
- Select qualified MS lead agents.

**MOG-EAE model**

- Mice are immunized with MOG<sub>35-55</sub> myelin-associated peptide in complete Freund’s adjuvant, then treated with pertussis toxin to promote increased transport of leukocytes across the blood-brain barrier.
- Disease onset occurs after Day 10.
- Major endpoints for assessment:
  - body weight measurements
  - Disease Paralysis Scoring (daily after Day 10)
  - cytokine levels
  - FACS analysis of immune cell populations
  - perfusion of the brain and spinal cord for histopathology assessment.

![MOG-EAE Model Validation with FTY-720 (Fingolimod)](image)

**MOG-EAE Mouse Model Representative Spinal Cord Histopathology**

Black arrows: perivascular infiltration of lymphocytes; arrowheads: extension of inflammatory cells into the white matter (W) with axonal degeneration; G: gray matter. Anti-CD3 staining illustrates infiltration of CD3+ T cells into the white matter.