

INFLAMMATORY BOWEL DISEASE (IBD)

Inflammation is a vital part of the body's immune response. It is the body's attempt to heal itself after an injury; defend itself against foreign invaders, such as viruses and bacteria; and repair damaged tissue. Biomere's interest in inflammatory disease stems from our expertise in autoimmunity.

We offer models of systemic lupus erythematosus (SLE) as well as antigen induced inflammation such as collagen induced arthritis and myelin peptide-induced experimental autoimmune encephalomyelitis (EAE) as a model of multiple sclerosis. Additionally we offer chemically induced models of inflammatory bowel disease (IBD)/ulcerative colitis and Type 1 diabetes.

INDUCIBLE MODELS

Acute 2,4 6-trinitrobenzenesulfonic acid (TNBS) hapten

- Mediated by Th1 and Th17 cells locally producing excessive proinflammatory cytokines including IFN- γ , TNF- α , IL-2, IL-12 and IL-18

Acute dextran sulfate sodium (DSS)

- Suggested epithelial cell toxicity, increased intestinal permeability, and macrophage activation



IBD READOUTS

IBD Disease Activity Index

- Body weight
- Rectal bleeding scoring (hemocult kit)
- Stool scoring

Additional Analyses

- Interim blood collections for PK/PD evaluation
- Histology
- Collections for PK/PD evaluation

Colon Evaluation

- Colon length and weight measures
- Macroscopic colon scoring index
- 0 – 10 graded morphologic scoring

Microscopic Colon Scoring

- Histopathology assessment by an unbiased pathologist
- Inflammation and morphological damage

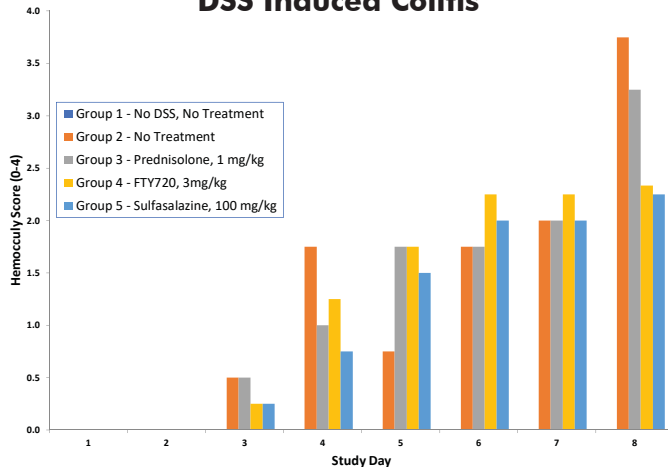
DSS Induced IBD in Mice

- 8 -10 animals per group
- Induction with 5% DSS in drinking water for consecutive days
- ~100% induction rate
- Disease onset on Day 3
- Peak disease on Day 8 - 10
- Positive control is available

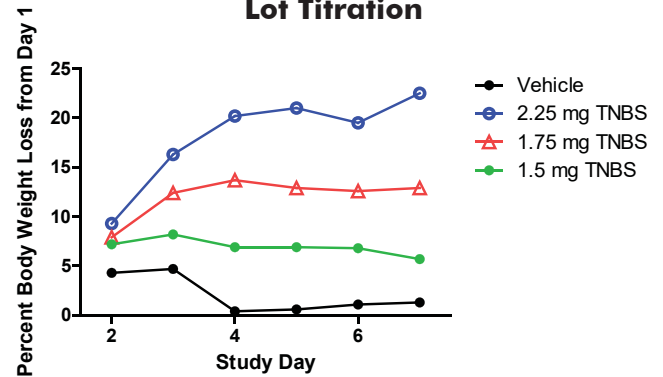
TNBS-Induced IBD in Mice

- 8 - 10 animals per group
- ~100% induction rate, low mortality
- Prophylactic or therapeutic treatment
- Intrarectal induction with TNBS hapten
- Study duration 5 to 8 days
 - ~Day 5 is the peak of disease severity
 - Day 8 represents a recovery phase

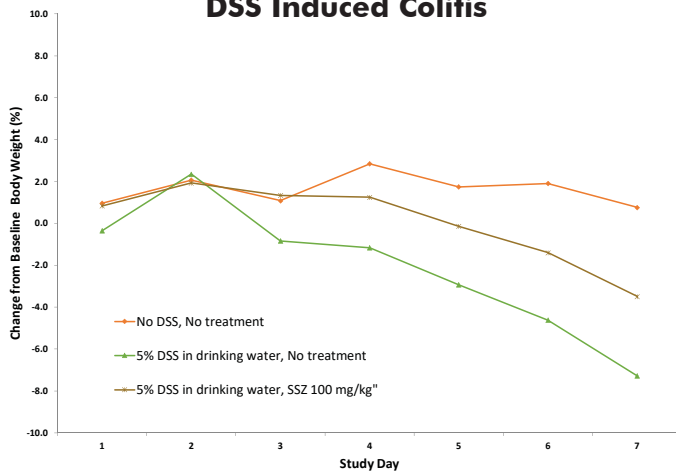
DSS Induced Colitis



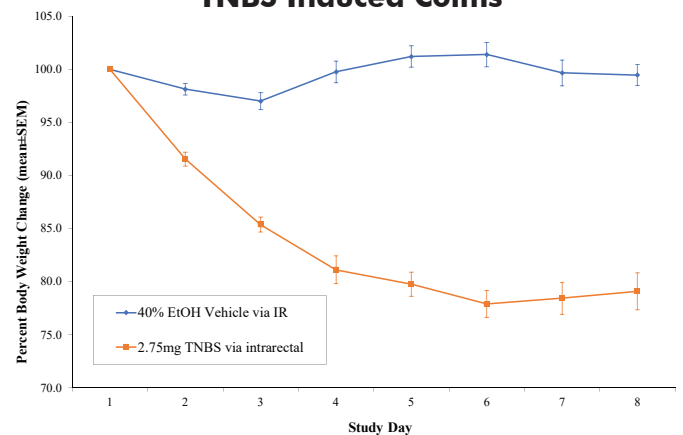
Lot Titration



DSS Induced Colitis



TNBS Induced Colitis



© Biomere, 2020

IT'S PERSONAL.

Driven to expedite your journey.



"1.3% of adults in the United States are diagnosed with Inflammatory Bowel Disease (IBD). Biomere offers several rodent models of IBD to assure we meet your research needs. Together we can work to change this statistic and help millions of people suffering from IBD."

- Amy D., Client Services and Alliance Management Lead