

Gastrointestinal Models

We provide expert preclinical research services using validated rodent gastrointestinal (GI) models to support drug development. Our capabilities include models for IBD, gastric ulcers, and gut motility in mice and rats. With comprehensive study design, histological and biomarker analysis, and functional GI assessments, we deliver high-quality, reproducible data to advance your GI therapeutics efficiently.

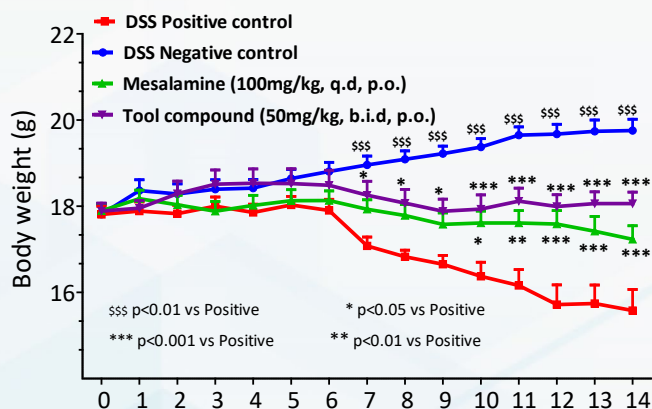
- **DSS-Induced Colitis**

The Dextran Sulfate Sodium (DSS)-induced colitis model is a widely used experimental model for studying inflammatory bowel disease (IBD), particularly ulcerative colitis. Administering DSS in drinking water to rodents causes damage to the colonic epithelium, leading to intestinal inflammation, mucosal ulceration, bloody diarrhoea, and weight loss, closely resembling human colitis. This model triggers innate immune responses and allows investigation of the pathophysiology of gut inflammation, epithelial barrier dysfunction, and immune modulation. It is valuable for evaluating potential therapies targeting IBD.

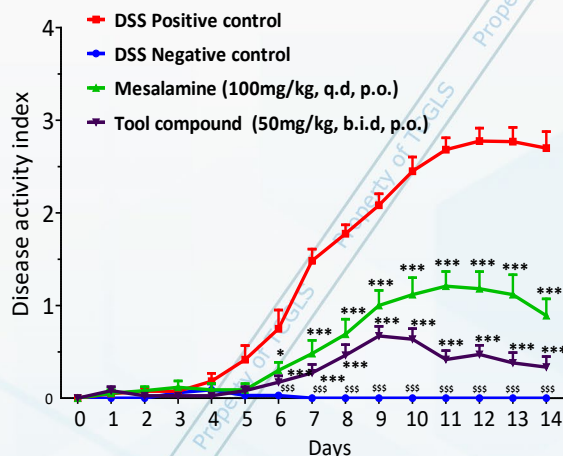
Validation results

- Animals: Female Balb/c mice
- Induction: 3% DSS solution in drinking water for 14 days
- Endpoint: Body weight, fecal consistency, rectal bleeding, disease activity index, colon length, colon histopathology

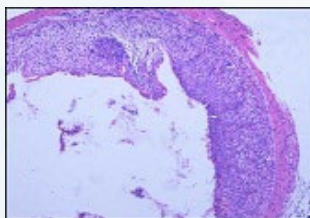
Effect of tool compound on Body weight in DSS induced colitis



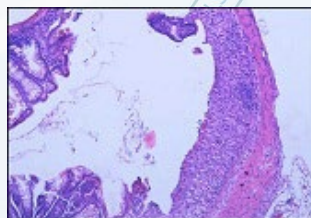
Change in Disease Activity Index (DAI)



Negative control



DSS control



Mesalamine



Tool Compound

* $p < 0.05$, ** $p < 0.01$ *** $p < 0.001$ vs Vehicle

Statistical analysis: Two-way ANOVA followed by Bonferroni posttests

- Gastric Ulcer
- Colonic Motility

Key Features

1

Validated rodent GI models for IBD, gastric ulcer, and gut motility

2

Comprehensive study design with histological and biomarker analysis

3

Functional GI assessments for robust and reproducible results

Our GI models provide robust, decision-enabling data for evaluating candidates in diseases where inflammation, motility, and epithelial integrity are key endpoints.