



# SELECTED OPPORTUNITIES IN INFLAMMATORY DISEASES

Use of Polydextrose for the Treatment of IBD and Other Inflammatory Diseases (BIO 17301)

# USE OF POLYDEXTROSE FOR THE TREATMENT OF IBD AND OTHER INFLAMMATORY DISEASES (BIO 17301)

## Product factsheet

*In Vivo PoC*

- ▶ **Target:**
  - ◆ Gut Microbiota
- ▶ **Product:**
  - ◆ Tested: Polydextrose (prebiotic)
- ▶ **Application:**
  - ◆ Inflammatory diseases
  - ◆ More particularly inflammatory bowel diseases
- ▶ **Rational:**
  - ◆ The gut microbiota has emerged as a central factor affecting human health and disease, and inflammatory diseases are no exception
  - ◆ The potential role of the gut in the pathophysiology of inflammatory diseases has recently begun to attract increased attention
- ▶ **POC:**
  - ◆ In the murine model of DSS-induced colitis that the prebiotic, polydextrose (PDX), ameliorates survival, increases colon-length and weight gain after settlement of colitis and thus demonstrate that the fibre provides anti-inflammatory properties
- ▶ **Patent and publication:**
  - ◆ PCT/EP2019/053480: USE OF POLYDEXTROSE FOR THE TREATMENT OF INFLAMMATORY DISEASES

## Proof of concept

In Vivo PoC

### Polydextrose Pretreatment Improves Recovery and Survival in DSS-induced Colitis in Mice

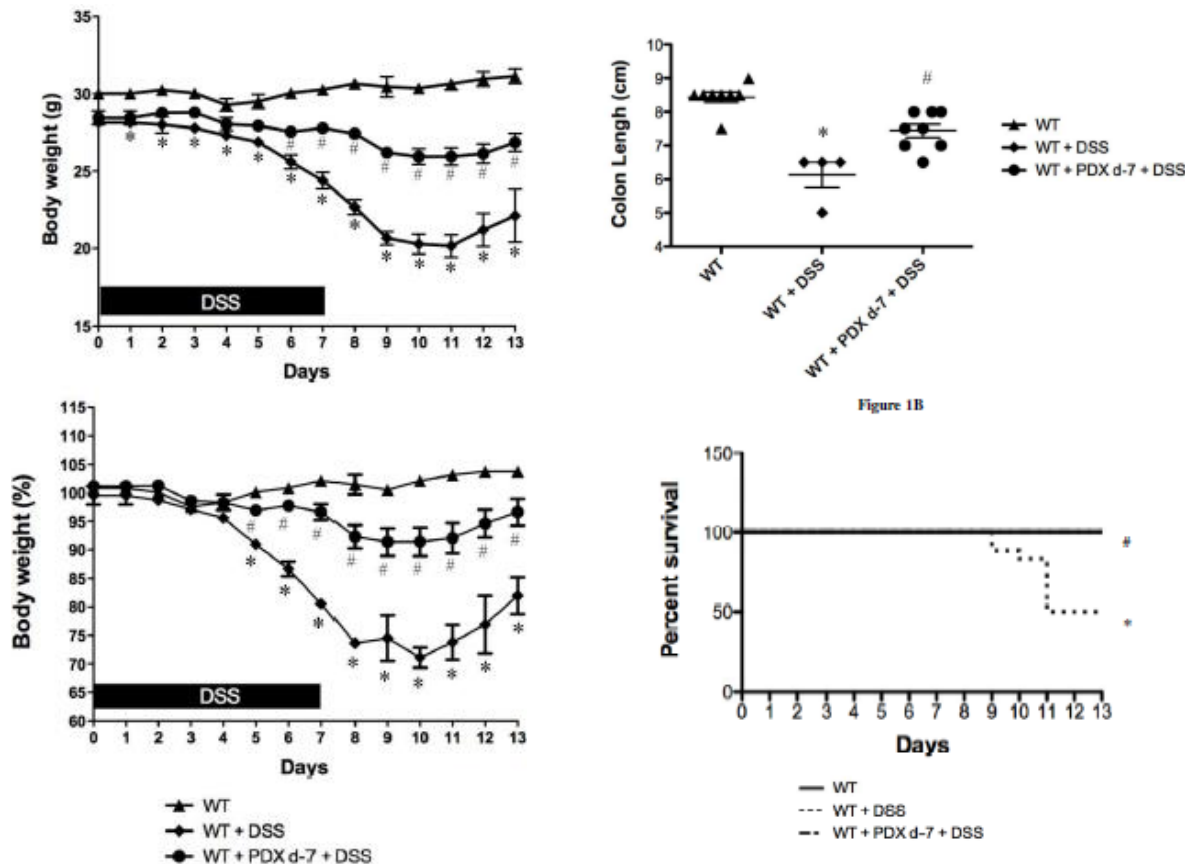


Figure: (**Left panel**) recovery is greater in mice pre-treated with Polydextrose (PDX) 7 days before administration of dextran sulfate sodium (DSS)-induced colitis, with earlier weight gain, and that PDX pre-treatment significantly increased colon length after DSS exposure (Figure 1B). \*:  $P < 0.05$  versus WT; #:  $P < 0.05$  versus DSS. (**Right panel**) Polydextrose pre-treatment ameliorates mice survival following DSS-induced colitis. \*:  $P < 0.05$  versus WT; #:  $P < 0.05$  versus DSS.

# USE OF POLYDEXTROSE FOR THE TREATMENT OF IBD AND OTHER INFLAMMATORY DISEASES (BIO 17301)

## Proof of concept

In Vivo PoC

### Polydextrose Pretreatment Improves Recovery and Survival in DSS-induced Colitis in Mice Fed with HFD

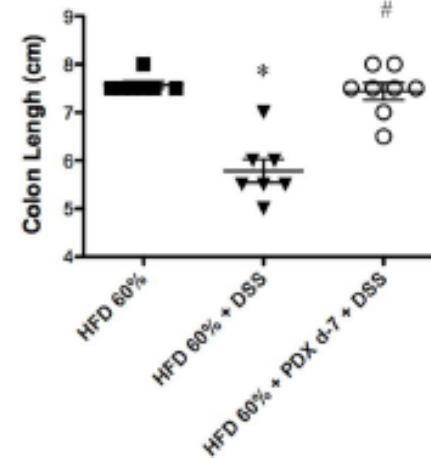
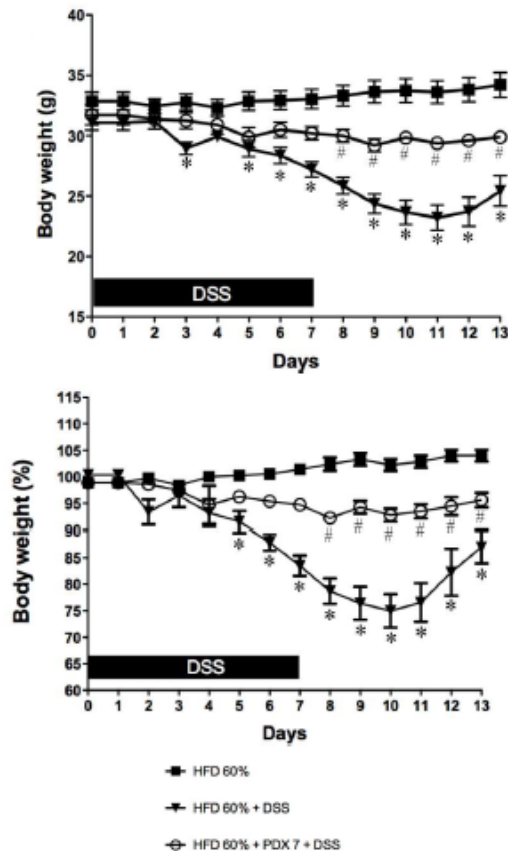


Figure: recovery is greater in mice pre-treated with Polydextrose (PDX) after 1 month of HFD 60% and after DSS-induced colitis (**Left panel**), with earlier weight gain, and that PDX pre-treatment significantly increased colon length after DSS exposure (**Right panel**).

\*:  $P < 0.05$  versus WT; #:  $P < 0.05$  versus DSS.

## Polydextrose Treatment Improves Recovery and Survival in DSS-induced Colitis in Mice

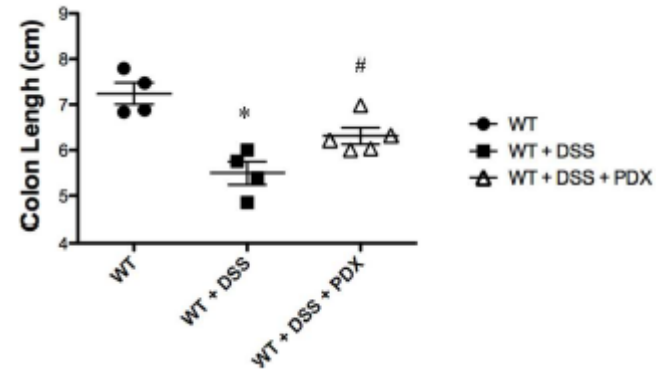
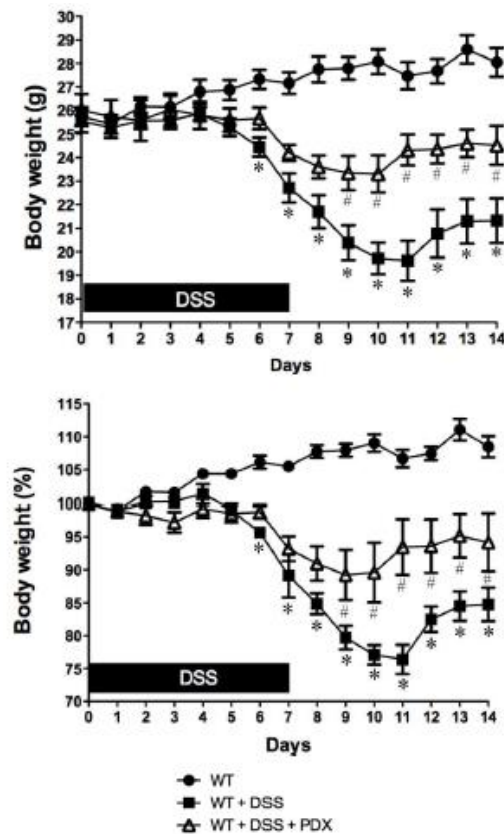
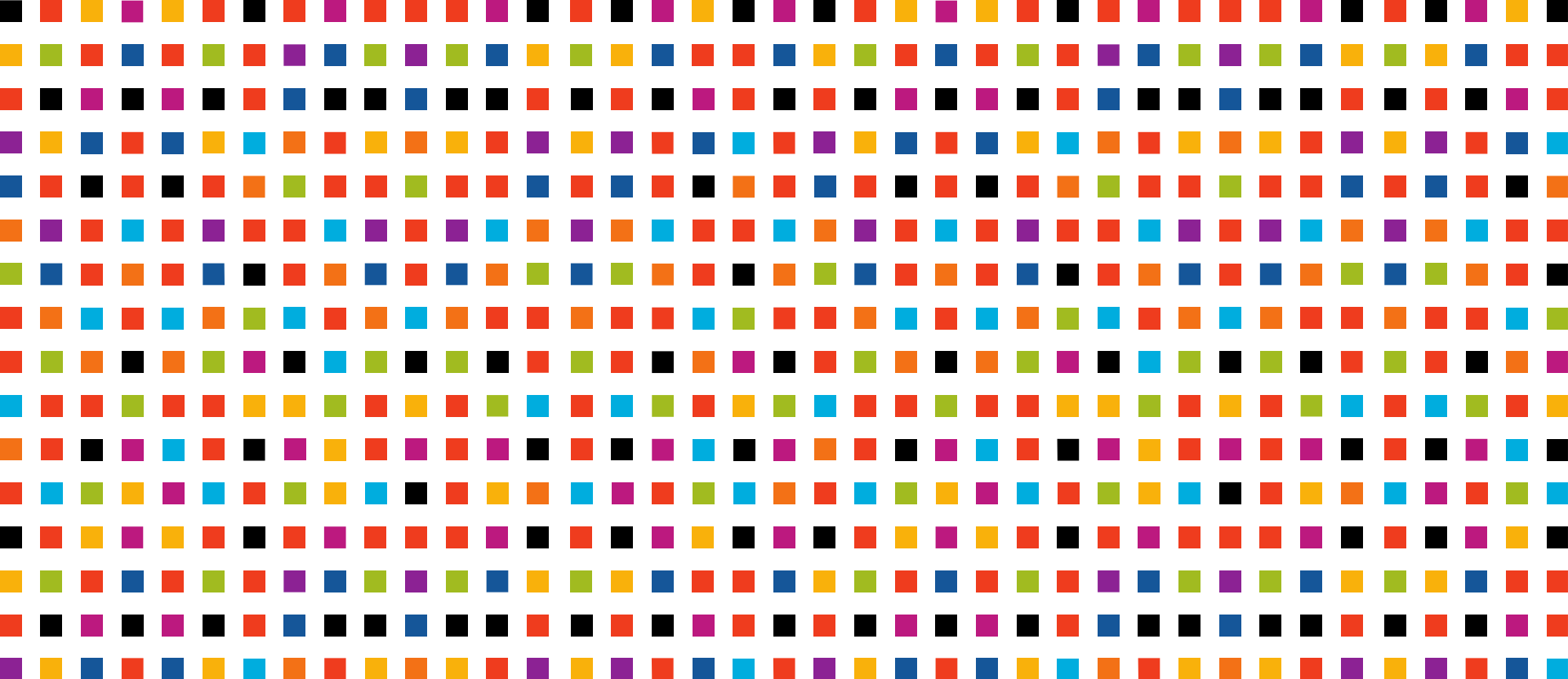


Figure: recovery is greater in mice treated with Polydextrose (PDX) **after** DSS-induced colitis (**Left panel**), with earlier weight gain, and that PDX treatment significantly increased colon length after DSS exposure (**Right panel**). \*:  $P < 0.05$  versus WT; #:  $P < 0.05$  versus DSS.



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