

Supplemental Data

Control of lupus nephritis by the gut microbiota

(Mu et al.)

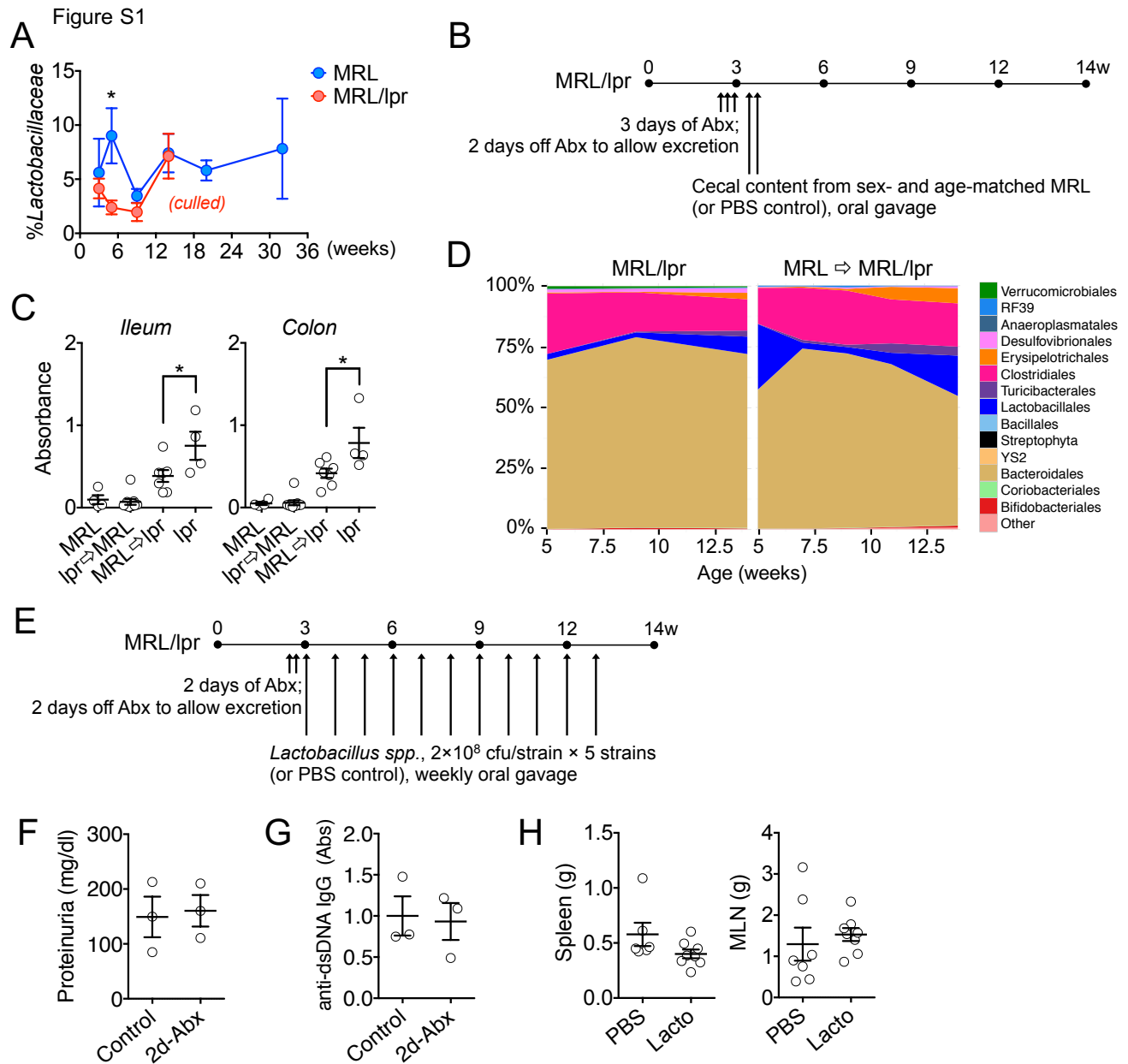


Figure S1. (A) Relative abundance of *Lactobacillaceae* in fecal microbiota (n=4 per group; * $P < 0.05$ at 5 weeks of age). (B) Study design of cecal transplantation from MRL to *lpr* mice. (C) Level of anti-dsDNA IgG produced by 1-cm long ileal or colonic organ culture after 24 h incubation (n>3 per group; * $P < 0.05$). (D) Time-dependent changes of fecal microbiota upon cecal transplantation. Abundant bacterial OTU (>0.1%) were summarized (n=4 per group). (E) Study design of *Lactobacillus* treatment of *lpr* mice. (F-G) Female MRL/*lpr* mice were treated with PBS control or mixed antibiotics (Abx) for 2 days at 3 weeks of age and sacrificed at 14 weeks of age (n=3 per group). The levels of proteinuria (F) and anti-dsDNA antibodies (G) at 14 weeks of age are shown. The differences were not significant. (H) Weight of spleen and MLN of *lpr* mice upon *Lactobacillus* treatment.

Figure S2

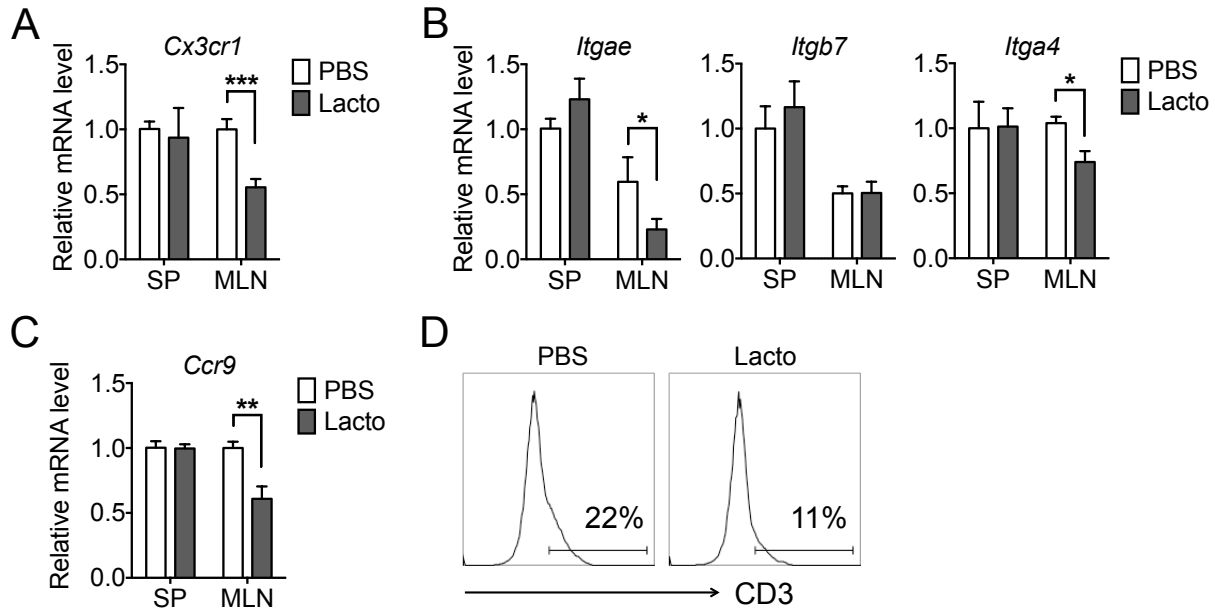


Figure S2. (A) Transcript level of CX3CR1 in lymphoid tissues of *lpr* mice treated with PBS or *Lactobacilli*. (B) Transcript levels of CD103 (*Itgae* and *Itgb7*) and $\alpha4\beta7$ (*Itga4* and *Itgb7*). (C) Transcript level of CCR9. (D) Percentage of CD3⁺ T cells in the intestinal lamina propria. * $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$.

Figure S3

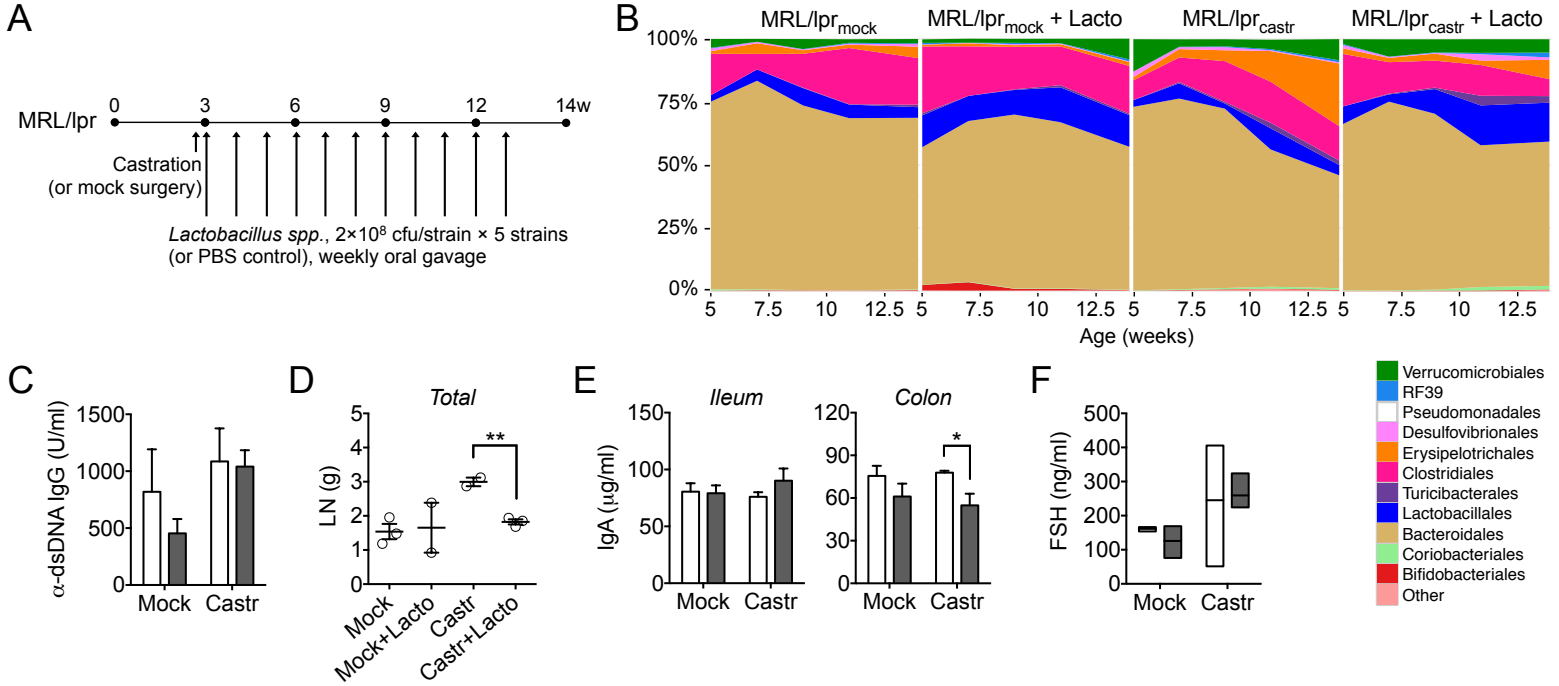


Figure S3. (A) Study design of surgery and treatment in male *lpr* mice. (B) Time-dependent changes of fecal microbiota. Castr, castration. (C) Level of anti-dsDNA IgG in the blood (n=5 per group). (D) Total weight of lymph nodes (LN) from multiple sites (** $P < 0.01$). (E) Level of IgA produced by 1-cm sections of ileal or colonic organ culture after 24 h incubation (* $P < 0.05$). (F) Level of FSH in the blood.

Figure S4

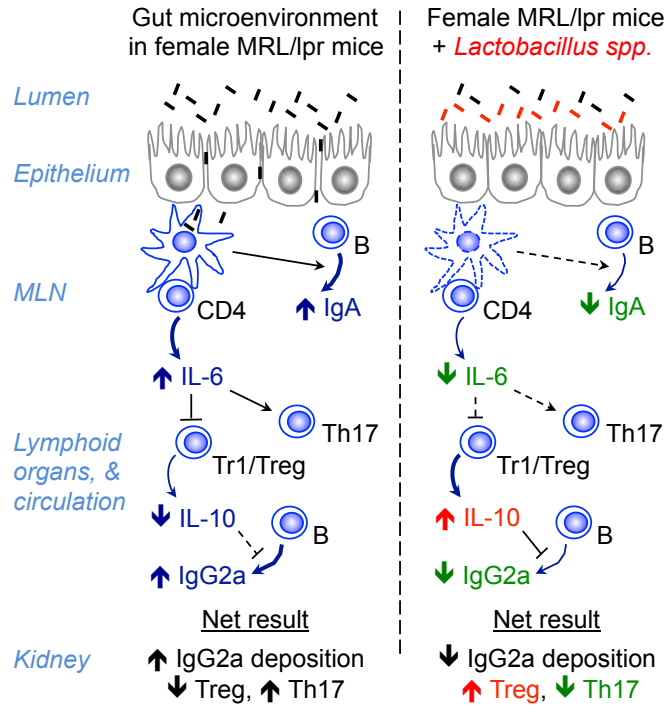


Figure S4. Working model (see text for details).