A diet based on cured acorn ham with oleic acid content promotes anti-inflammatory gut microbiota shifts and prevents ulcerative colitis in an animal model

Supplementary Material

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Figure S1. Effect of acorn ham on colon and small intestine parameters. Circles and squares indicate the corresponding value or score for each rat. **A**, percentage of colon length reduction, in comparison with the mean value for absolute control animals in each cohort. This reduction mean value for acorn-feed ham cohort was lower (14.67%) than in the case of the mean value for feed cohort (20.62%), but this difference was not statistically significant. **B**, presence of reparative changes in colon mucosa: 0, no reparative changes; 1, mild reparative changes (less than 50% of ulcerations surface is re-epithelized); 2, moderate reparative changes (more than 50% of ulcerations are re-epithelized); 3, severe reparative changes (total ulcerations re-epithelization). Although in acorn-feed ham cohort the re-epithelization mean score (1.75) was higher than in feed cohort (1.12), this difference was not statistically significant. **C**, percentage of increase in the number of hyperplastic Peyer's patches in small intestine, in comparison with the mean value for absolute control animals in each cohort. Although in acorn-feed ham cohort (23.53% increase) the mean value of hyperplastic Peyer's patches was lower than in feed cohort (45.31% increase), this difference was not statistically significant. **D**, Evans blue assay showed no statistical significant differences among acorn-feed ham cohort (0.06 µg/mL) and feed cohort (0.10 µg/mL). This assay indicates alterations in colon permeability, which is higher in UC condition.

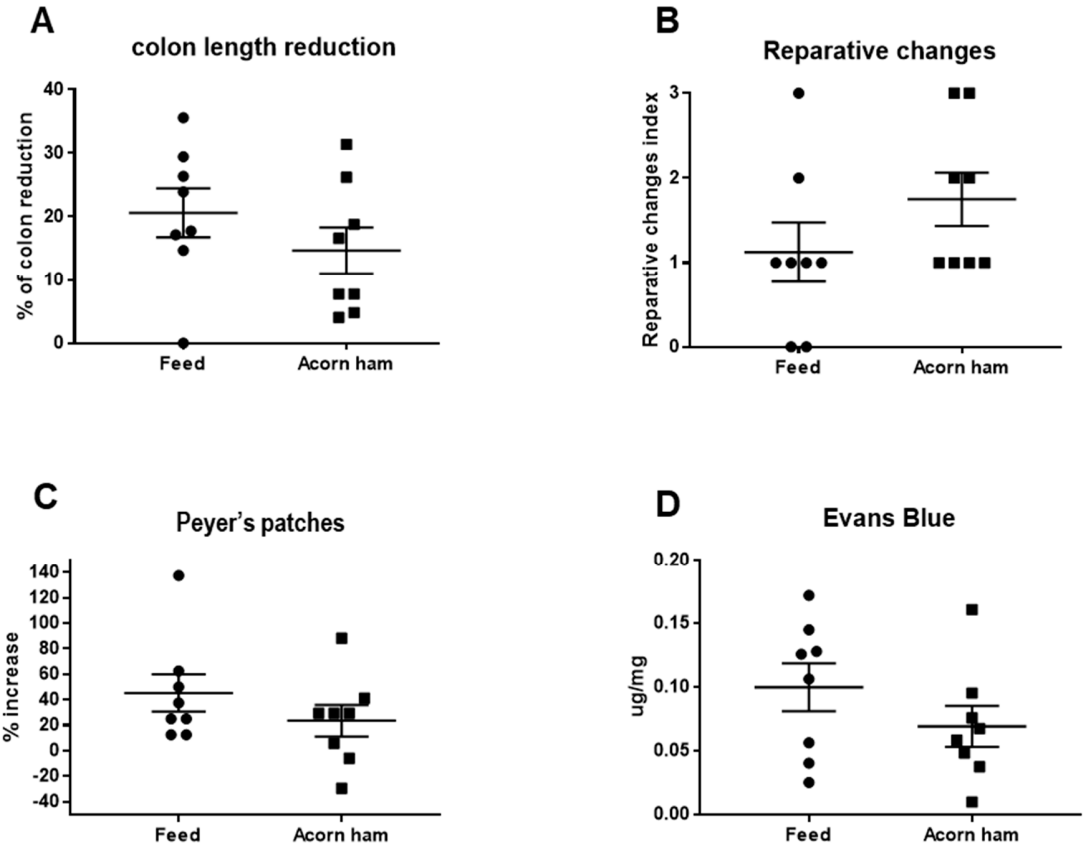

Figure S2. Intestinal microbiota composition (Families). Absolute control animals from each cohort (animals 9 and 10) showed strong differences between vegetable feed cohort and both meat products cohorts, at the level of *Firmicutes*, *Bacteroidetes* and *Proteobacteria* phyla. F: feed, C: control ham; A: acorn-fed ham.

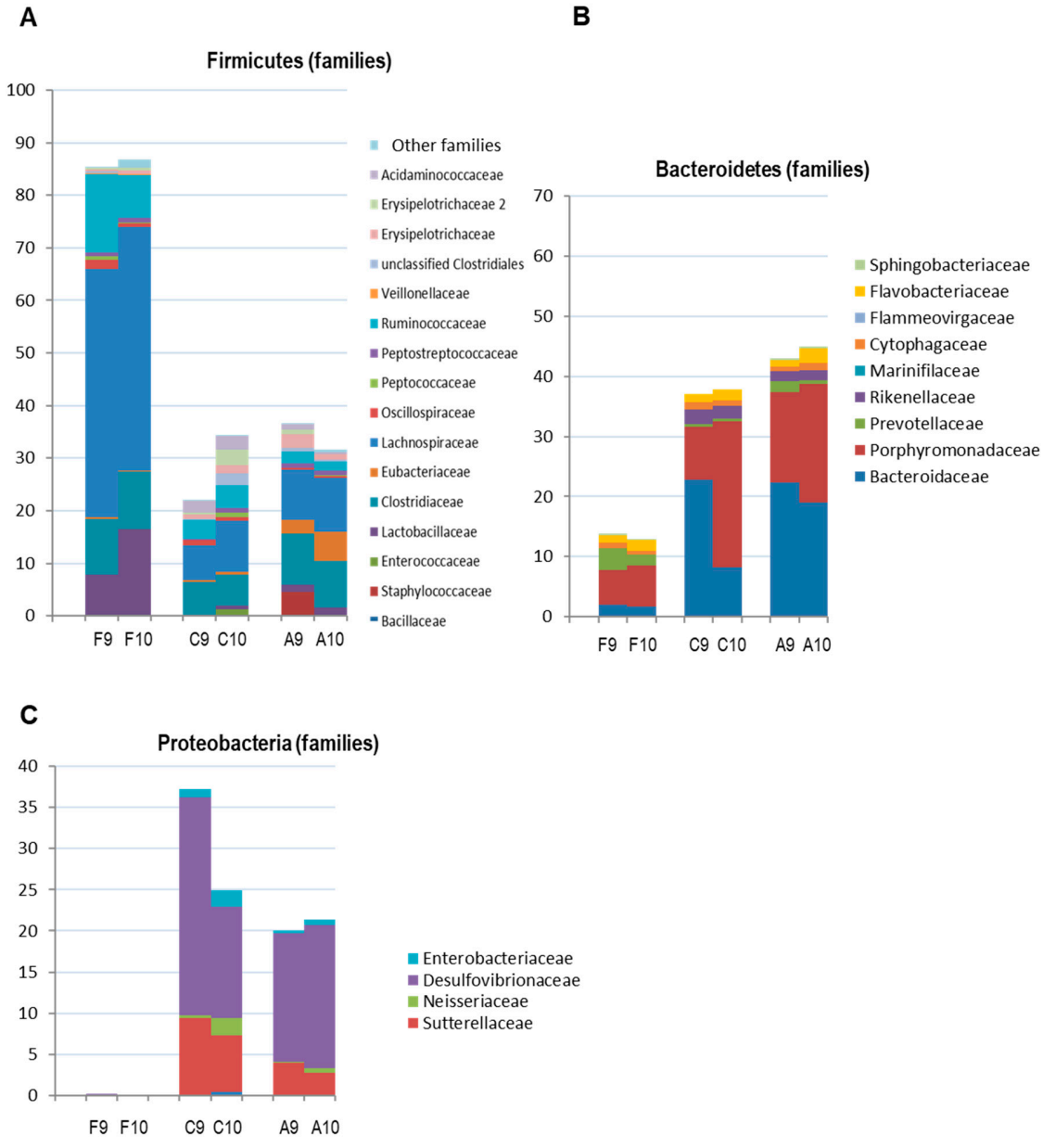

Figure S3. Taxonomic groups associated to nitrate reductase enzymatic activity in intestinal microbiota. The relative percentage of the phylum Actinobacteria and the classes Betaproteobacteria and Gammaproteobacteria, which usually show nitrate reductase gene functions, is shown for absolute control animals from both types of ham cohorts. CH: control ham; AH: acorn-feed ham.