

Supplement material

Table S1

Nutrient Composition in Carrot Juice^a

Condition	Total Sugar (g/100ml)	Protein (g/100ml)	Fat (g/100ml)	Soluble Solid (g/100ml)	pH	Moisture (g/100ml)	Water Activity
Non-fermented carrot juice	4.2±0.12	0.37±0.01	<0.1	6.1±0.1%	6.5	72.84±0.01	0.832±0.001
Fermented carrot juice	3.39±0.21*	0.44±0.02*	<0.1	7.5±0.2%*	4.01±0.17*	69.64±0.58*	0.841±0.004

^aAll data presented as means ± SD. *represent $p < 0.05$, compared with non-fermented carrot juice.

Fig. S1

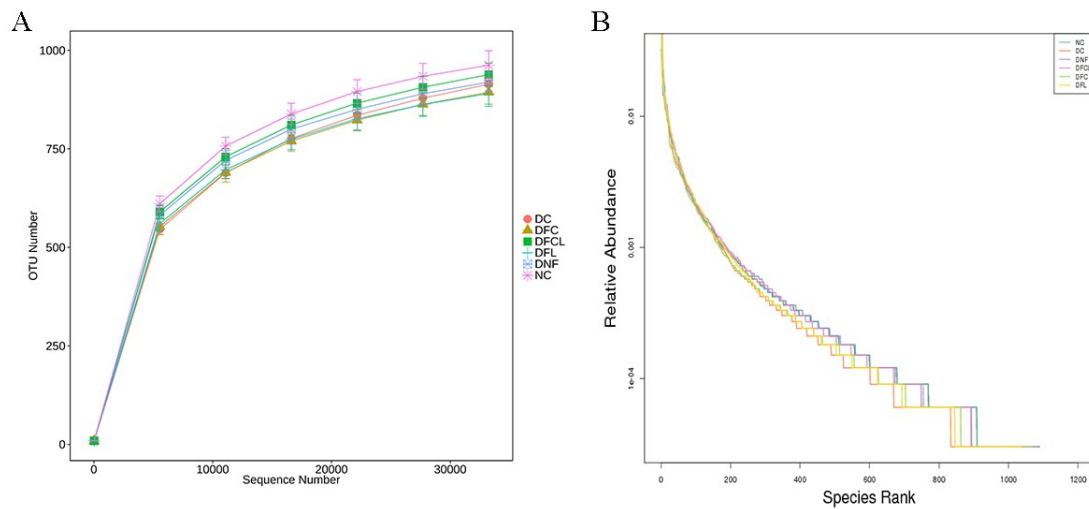


Figure S1. Alpha diversity analysis of the sequence reads. (A) Rarefaction curves of the experimentally observed OTUs versus. (B) Rank abundance curve of bacterial OTUs derived from each sample. Normal control (NC), diabetes control (DC), DC plus non-fermented carrot juice (DNF), DC plus fermented carrot juice with LGG (DFCL), DC plus fermented carrot juice (DFC), and DC plus 10^9 CFU/mL LGG (DFL).

Fig. S2

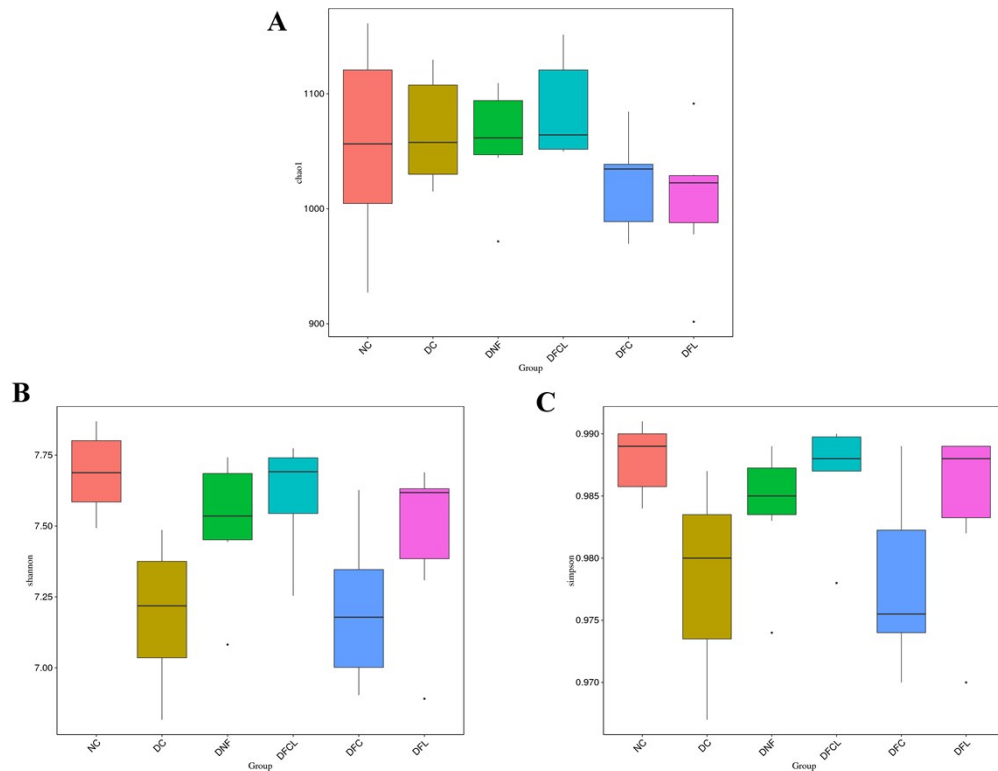


Figure S2. Changes in the alpha-diversity of gut microbial species. Box plots representing the changes in species Chao1 index (A), Shannon index (B) and Simpson index (C) are shown for each group of rats. Whiskers in the boxplots represent the range of minimum and maximum values within a group, excluding outliers. Boxplots denote top quartile, median, and bottom quartile. Normal control (NC), diabetes control (DC), DC plus non-fermented carrot juice (DNF), DC plus fermented carrot juice with LGG (DFCL), DC plus fermented carrot juice (DFC), and DC plus 10⁹ CFU/mL LGG (DFL).