BLACK CORN (ZEA MAYS L.) FLOUR CONSUMPTION IMPROVED THE GUT DYSBIOSIS PROMOTED BY A HIGH-FAT DIET ON MIC

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Abstract

High-fat diets are associated with intestinal dysbiosis and a leaky gut leading to intestinal inflammation. Bioactive components, including phenolic compounds, isolated or in the original are the most abundant bioactive compound. This study investigated the preventive effects of black corn whole flour on intestinal health and gut microbiota in mice fed a high-fat diet. T (fed a normal diet); HF: high-fat (fed a high-fat diet: 60% of calories from fat); HFC: high-fat corn (fed a high-fat diet added with 20% of black corn whole flour). After the 8 weeks of diet measured by high-performance liquid chromatography. The number of colonic goblet cells was analyzed by histomorphology analyses. The data were analyzed by ANOVA and post-ho The black corn whole flour (20%) consumed by mice promoted positive changes in the intestinal homeostasis by enhancing the diversity of cecal bacterial communities through a higher in the HFC group. Further, there was no difference in cecal SCFA concentration, but an increase in goblet cell number after the black corn flour intake. The rise in the genus Roseburia mi the proliferation of Prevotellacea-UCG 001 is related to the improvement of lipid metabolism by inhibiting fatty acids synthesis. Further, as the consumption of black corn flour stimulate the growth of Akkermansia. We highlight that even with an increase in the relative abundance of genus responsible for producing SCFA no changes at the colonic SCFA level were obser cell numbers. These findings suggest that black corn whole flour for eight weeks as a source of anthocyanins could partially alleviate the undesirable intestinal modifications associated a potential candidate as functional food promoting beneficial intestinal effects.

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Keywords

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