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Summary

PROTECTIVE EFFECTS OF STW 5 AGAINST CHANGES IN THE MICROBIOME IN AN EXPERIMENTAL MODEL OF FUNCTIONAL DYSPEPSIA

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A preclinical rat study examined whether STW 5, a herbal medicinal product, could prevent stress-induced gut microbiota changes in an experimental model of functional dyspepsia.

KEY POINTS

- Functional dyspepsia was induced in rats through neonatal maternal separation followed by one week of daily 90-minute restraint stress, and one group received liquid STW 5 (5 ml/kg) during the stress week while another received vehicle.
- The stress model produced a 50% drop in Lactobacilli population, a two-fold rise in Proteobacteria abundance, a more than two-fold increase in Methanobrevibacter, and a near-complete depletion of Bifidobacterium genomic DNA (from approximately 3 ng/g feces to nearly nil).
- STW 5 treatment tended to ameliorate and protect against the microbiota changes induced by the stress model, including at least partial antagonism of changes in lactobacilli.
- The authors conclude that the findings lend further support to the use of STW 5 in functional dyspepsia and irritable bowel syndrome by providing evidence it acts at least in part through beneficially influencing stress-induced changes in intestinal microbiota.
- The study may be of interest to researchers investigating herbal treatments for disorders of gut-brain interaction and the role of microbiota in functional gastrointestinal disorders.

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