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وزارة التعليم العالي
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البحث رقم (٥)

Title:

"Ameliorative Effect of Heat-Killed *Lactobacillus plantarum* L.137 and/or Aloe vera against Colitis in Mice".

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Abstract:

Inflammatory bowel disease (IBD) is one of the predominant intestinal diseases associated with chronic inflammation and ulceration of the colon. This study explored the ameliorative effect of *Aloe vera* extract (Aloe) and/or heat-killed *Lactobacillus plantarum* L.137 (HK L.137) on dextran sodium sulfate (DSS)-induced colitis in mice. Aloe and/or HK L.137 were supplied for 9 days and the mice were challenged with DSS for 7 days. The DSS group demonstrated bloody diarrhea, colitis of high histologic grade, increased nuclear factor-kappa B (NF-κB) p65, inducible nitric oxide synthase (iNOS), myeloperoxidase (MPO), interleukin (IL)-6, and tumor necrosis factor (TNF)-α, and decreased IL-10 expression. These alterations were dwindled in DSS-induced mice treated with Aloe and HK L.137 separately. Aloe and HK L.137 together have augmented the therapeutic effect of each other. In conclusion, our findings demonstrated that Aloe and/or HK L.137 ameliorated DSS-induced colitis by promoting the secretion of anti-inflammatory cytokines and suppressing pro-inflammatory mediators. This study indicated that *A. vera* may function synergistically with HK L.137 to confer an effective strategy to prevent colitis.