

# Antimycotic and antioxidant effects of Harpagophytum procumbens water extract.

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**Abstract:** In the present study, we investigated the water extract of Harpagophytum procumbens DC. ex Meisn. in an experimental model of inflammatory bowel diseases (IBDs). Additionally, a microbiological investigation was carried out to discriminate the efficacy against bacterial and fungal strains involved in IBDs. Finally, an untargeted proteomic analysis was conducted on more than one hundred colon proteins involved in tissue morphology and metabolism. The extract was effective in blunting the production of oxidative stress and inflammation, including serotonin, prostaglandins, cytokines, and transcription factors. Additionally, the extract inhibited the growth of *Candida albicans* and *C. tropicalis*. The extract was also able to exert a pro-homeostatic effect on the levels of a wide plethora of colon proteins, thus corroborating a protective effect. Conversely, the supraphysiological downregulation of cytoskeletal-related proteins involved in tissue morphology and antimicrobial barrier function suggests a warning in the use of food supplements containing *H. procumbens* extracts.

**Keywords:** Harpagophytum procumbens; IBDs; *Candida albicans*; *Candida tropicalis*; inflammation; oxidative stress; proteomic analysis

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