

FULL TEXT LINKS

[Review](#) > [Biofactors](#). 2022 Jan;48(1):7-21. doi: 10.1002/biof.1808. Epub 2021 Dec 9.

Ginger and its constituents: Role in treatment of inflammatory bowel disease

Naser-Aldin Lashgari¹, Nazanin Momeni Roudsari¹, Danial Khayatan¹, Maryam Shayan^{2 3}, Saeideh Momtaz^{4 5 6}, Basil D Roufogalis^{7 8}, Amir Hossein Abdolghaffari^{1 4 5 6}, Amirhossein Sahebkar^{9 10 11 12}

Affiliations

PMID: 34882874 DOI: [10.1002/biof.1808](https://doi.org/10.1002/biof.1808)

Abstract

Inflammatory bowel diseases (IBD), with obscure etiology, are rising and are of worldwide concern. Of the various components of IBD pathogenesis and progression, irritation appears to play a major part. Investigations on the molecular and cellular pathways that activate the IBD provide the focus for the development of useful therapies. Ginger (the rhizome of *Zingiber officinale*) has a broad spectrum of clinical applications due to its anti-inflammatory and anti-oxidative functions. Inflammation and oxidative stress are the key pathogenic factors in many diseases, including IBD. The most established components of ginger are phenolic compounds called gingerols. A wide range of pharmacological activities of the potential therapeutic benefit of *Z. officinale* have been detailed. In this regard, the anti-inflammatory activity of ginger has been documented by many researchers. It was shown that ginger is a potent inhibitor of the nuclear factor kappa B (NF- κ B), signal transducer of activators of transcription (STATs), Nod-like receptor family proteins (NLRPs), toll-like receptors (TLRs), mitogen-activated protein kinase (MAPKs), and mTOR (mTOR) pathways, as well as inhibiting various pro-inflammatory cytokines. In the present report, the potential application of ginger in the management of IBD is reviewed in detail, with an emphasis on the relevant properties of ginger and its bioactive components. The significance of the functions, side effects, and delivery of ginger to the digestive system for particular application in IBD are also considered.

Keywords: IBD; *Zingiber officinale*; drug delivery system; ginger; oxidative stress.

© 2021 International Union of Biochemistry and Molecular Biology.

Related information

[MedGen](#)

LinkOut - more resources

Full Text Sources

[Ovid Technologies, Inc.](#)[Wiley](#)

Miscellaneous

[NCI CPTAC Assay Portal](#)