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Review

Cannabinoid pharmacology and therapy in gut disorders

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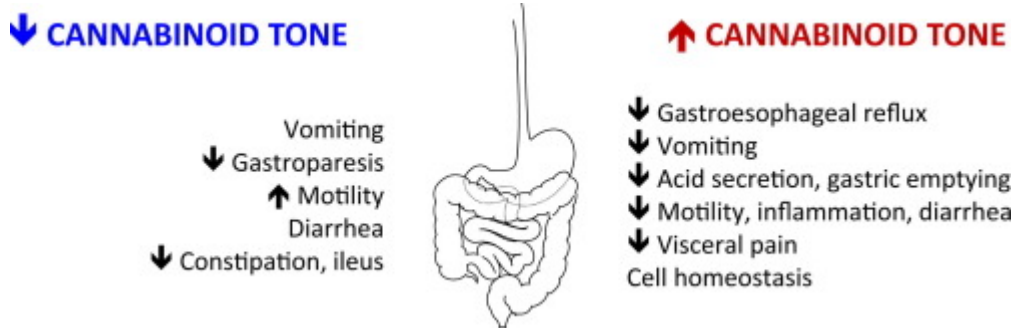
Abstract

Cannabis sp and their products (marijuana, hashish...), in addition to their recreational, industrial and other uses, have a long history for their use as a remedy for symptoms related with gastrointestinal diseases. After many reports suggesting these beneficial effects, it was not surprising to discover that the gastrointestinal tract expresses endogenous cannabinoids, their receptors, and enzymes for their synthesis and degradation, comprising the so-called endocannabinoid system. This system participates in the control of tissue homeostasis and important intestinal functions like motor and sensory activity, nausea, emesis, the maintenance of the epithelial barrier integrity, and the correct cellular microenvironment. Thus, different cannabinoid-related pharmacological agents may be useful to treat the main digestive pathologies. To name a few examples, in irritable bowel syndrome they may normalize dysmotility and reduce pain, in inflammatory bowel disease they may decrease inflammation,

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This review summarizes the main recent findings on the role of cannabinoid receptors, their synthetic or natural ligands and their metabolizing enzymes in normal gastrointestinal function and in disorders including irritable bowel syndrome, inflammatory bowel disease, colon cancer and gastrointestinal chemotherapy-induced adverse effects (nausea/vomiting, constipation, diarrhea).

Graphical abstract

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Keywords

Cannabinoid; Chemotherapy-induced adverse effects; Colorectal cancer; Inflammatory bowel disease; Irritable bowel syndrome

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