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A Review on Pharmacology of Finger Millet

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Abstract: *Finger millet (Eleusine coracans) is a traditional cereal grain widely consumed across regions in Africa and Asia due to its high nutritional value. In recent years, its pharmacological potential has garnered significant attention. This review aims to consolidate existing k on the pharmacological properties of finger millet, highlighting its bioactive components, therapeutic effects, and underlying mechanisms. Rich in polyphenols, flavonoids, dietary fibre and essential minerals such as calcium and iron, finger millet exhibits a wide array of biological activities including antioxidant, anti-inflammatory, antidiabetic, antimicrobial, and bone health- promoting effects. These benefits are primarily attributed to its high content of bioactive compounds, which exhibit free radical scavenging, enzyme inhibitory, and gut microbiota modulation properties.*

Additionally, finger millet has been shown to support glycaemic control, improve lipid profiles, and potentially contribute to bone mineralization due to its calcium content. However, while in vitro and animal studies provide promising results, clinical evidence remains limited. The processing of finger millet (e.g., germination, fermentation) enhances the bioavailability of its bioactive compounds, further improving its pharmacological efficacy. Despite its therapeutic potential, the wide variability in its phytochemical composition across different varieties and processing methods, as well as gaps in human clinical trials, pose challenges for standardization and dose optimization.

Overall, finger millet represents a functional food with notable pharmacological properties, offering potential as a nutraceutical in managing chronic conditions such as diabetes, cardiovascular diseases, and bone-related disorders. Further clinical research is needed to substantiate its efficacy and safety in human populations.

Keywords: Nutraceutical pharmacological properties antimicrobial, anti-inflammatory, antioxidant, anti-diabetic. Neuroprotective,anti-atherosclerogenic,and anti-tumorigenic properties. Other important terms content of Polyphenol, phenolic acid ,esstinal amino acids, vitamin, Mineral (calcium and iron). Research on finger millet are also terms related to nutraceutical value and potential for functional food and food security.

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