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Microgreens with Iron and Zinc Fortification Ameliorate Oxidative Stress in a Streptozotocin-Nicotinamide Diabetic Model

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The growing incidence of metabolic disorders such as diabetes and obesity has become a global health concern, necessitating the exploration of dietary interventions with functional and therapeutic benefits. Among these, microgreens have gained significant attention for their rich phytochemical composition and antioxidant properties. Additionally, iron and zinc are critical micronutrients that play a vital role in maintaining metabolic health and mitigating oxidative stress. This study aimed to evaluate the combined therapeutic potential of microgreens and iron and zinc fortification in modulating oxidative stress and metabolic dysfunction in streptozotocin-nicotinamide (STZ-NA)-induced diabetic models. The final phase focused on the development of functional food products by incorporating microgreens and fortified ingredients. Various formulations, including fortified biscuits, energy bars, and mixes, were designed to provide enhanced nutritional and antioxidative benefits.

Biography

Dr. Komal Chauhan is a distinguished academican and researcher in the field of Food Science and Nutrition. She holds a Ph.D. in Food Science and Nutrition from Banasthali University, Rajasthan, and has consistently demonstrated academic excellence as a scholarship holder and Gold Medallist at the Master's level.

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