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Muntingia calabura fruits - antioxidant and health benefits

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Cancer is the major cause of death worldwide, claiming over six million lives every year. In the recent years, alternative therapies have gained importance over conventional cancer for the treatment of cancer. Natural antioxidants, particularly in fruits and vegetables have gained increasing interest among consumers and the scientific community since epidemiological studies has indicated that frequent consumption of natural antioxidants is associated with a lower risk of cardiovascular disease and cancer. *Muntingia calabura* Linn is a plant that belongs to the family Elaeocarpaceae, commonly known as cherry tree. In the present study, the ripened fruits were collected and extracted with various solvents to detect its phytochemical constituents. The qualitative and quantitative phytochemical studies revealed the presence of phenolics, flavonoids, anthocyanins, ascorbic acid and vitamin E. The antioxidant activity of the fruits was studied *in vitro* with DPPH assay, superoxide radical, nitric oxide and hydroxyl radical scavenging assays. The *in vivo* studies such as anti-inflammatory, anti-cancer activity and anti-stress were also performed. From the experimental results it is clear that *Muntingia calabura* fruit is rich in antioxidant polyphenol and possess significant antioxidant activity, is an important and interesting finding because these fruits constitute part of the diet of weaning mothers in some countries. The work further exploits the potential of phytomedicine over chemotherapy in disease prevention and control. Thus, the incorporation of fruits into routine diet could prevent the risk of cardiovascular diseases, ageing, inflammations and cancers due to antioxidant compounds present in the fruits.

Biography

Preethi Kathirvel serves as an Assistant Professor in Department of Microbial Biotechnology at Bharathiar University, Coimbatore, India. She awarded PhD degree from Bharathiar University for her work on "Studies on antioxidant and pharmacological activities of *Muntingia calabura* fruits". She has published 22 research articles, two book chapters and edited two books in antioxidants and waste management field.

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