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Letter to the Editor

Keep calm and eat AAM (mango): mangiferin a miracle nutraceutical

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To the Editor,

The current rise of non-communicative diseases such as obesity and diabetes, as a worldwide epidemic requires an effective strategy to invent newer pharmaceuticals or nutraceuticals to break this trend.

Mangiferin and metabolic disorders

Plant extracts have long been a striking source of nutraceuticals and pharmaceuticals. Mangiferin (MGF) is one such product [1]. MGF is a natural plant polyphenol of C-glycosylxanthone found primarily in the mango tree (*Mangifera indica*) and honey bush (*Cyclopia* sp.), a popular medicinal herb [2]. MGF can be extracted from the leaves, heartwood, and stem bark of mango plant, which is the richest source. It is also found in the kernels and peels of mango fruit [3]. MGF is extracted easily and dissolves in water [2].



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Anti-cancer properties of MGF

It inhibits cancerogenesis by inducing in vivo and in vitro apoptosis [3]. MGF down-regulates inflammation, cell cycle arrest resulting in the reduction of proliferation and metastasis. In malignant cells, it promotes apoptosis thus protecting against oxidative stress and DNA damage [4]. Antiradical and antioxidant properties are due to the presence of four aromatic hydroxyl groups. It is an efficient iron chelator, inhibits the production of hydroxyl radical in Fenton-type reactions [3,4].

Anti-diabetic effect

Animal experiments with eight weeks of MGF treatment reduced the levels of plasma glucose and triglyceride levels in mice. It was also found to improve insulin sensitivity, modulate lipid profile, and revert adipokine levels [3].

Other effects of MGF

The other effects can be specified as followings: antimicrobial, antiviral, anti-inflammatory, antiallergic, analgesic, antisclerotic, cardio-, hepato-, and neuroprotective, and radioprotective against X-ray, gamma and UV radiation [3,4]. More scientific studies are required to study the therapeutic applications of MGF so that it can be used as a nutraceutical in treating and preventing various diseases.

Conflict of interest

The authors declare that they have no conflict of interest.

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