

Role of Celery (Apium Graveolens) As Detoxification Enzyme Inducer And Possible Metabolic Activation Mechanisms

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Abstract

Liver is the largest organ in human body whose main function is to detoxify toxicants through xenobiotic transformation and activation of antioxidants. Industrialization and production of synthetic products like cosmetics and pharmaceuticals have resulted in accumulation of chemicals in human body that are responsible for onset of degenerative diseases especially liver diseases. Recently, there have been increase interests in researches to identify the food and its components that pharmacologically have potential to prevent diseases without or with low side effects. Celery (*Apium graveolens*) is an aromatic annual herb; used as a medicinal remedy for various diseases as traditional herbal medicine. The hepatoprotective potential of celery is due to the presence of phytochemicals like flavonoids, mostly chryseoriol and apigenin; phenolic acids like cinnamic acids, coumarins and chlorogenic acid and essential oils like d-limonene and selinene present in leaves, roots and stems of celery. A number of in-vivo and in-vitro studies have documented the anti-inflammatory, anti-analgesic and anti-aggregation effect of celery. Moreover, celery is rich in antioxidants that decrease oxidative stress. Various studies of induced hepatotoxicity in rat model have revealed doses of celery extracts lessen the severity of toxicity; measured by various liver function tests like SGOT, SGPT, alkaline phosphatase and

bilirubin level in blood serum. In addition, celery extracts have also shown to reduce lipid peroxidation markers like TBARS and alter levels of enzymatic antioxidants like SOD, CAT, GPx and GST and non-enzymatic antioxidants like GSH in animal tissue. The compilation of diverse studies has shown celery as a potential therapeutic remedy to prevent liver diseases and disorders.

Biography:

Jyoti Bohra is a research scholar and currently pursuing her PhD from PAU, Ludhiana, Department of Food and Nutrition. She has qualified NET-JRF conducted by UGC, India. She secured All India 4th rank in ICAR-JRF (Indian Council of Agricultural Research) and completed her masters in Agriculture (Food Science and Nutrition) from UAS, GKVK, Bangalore. She has completed her graduation in Home Science from G.B.P.U.A & T, Pantnagar, Uttarakhand. She secured gold medal in merit list in both her under graduation and post-graduation. She is a life time member of Indian Dietetic Association and has attended many conferences under it.

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