

Conference Abstract

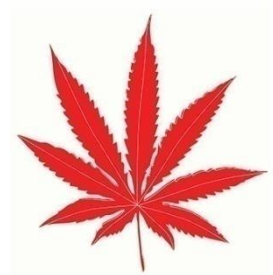
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1ST Pakistan Food –Nutrition International Summit 2019

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Conference Abstract

POLYPHENOLS: THE SCAVENGERS

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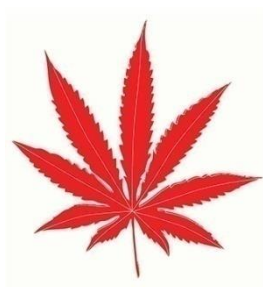
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ABSTRACT

Plant based foods naturally contains a group of water soluble compounds called as polyphenols. The compound has a complex structure containing about 5 – 7 aromatic rings and more than 12 phenolic hydroxyl groups. They have an antioxidant property which protects body from oxidative stress caused by reactive oxygen species (ROS). Multiple studies have proved that oxidative stress is the key for the formation of cancer in human body with a number of health problems caused by them. Naturally, polyphenols are found largely in plant-based foods like fruits and vegetables; and are proved to be the most potent antioxidants then vitamin E, vitamin C and carotenes. Their radical scavenging property is due to the substitution of hydroxyl groups in the aromatic rings of phenolic. Prevention of cancer through the use of polyphenols is one of the most documented biological properties. The main mechanism through which polyphenols protect human body from cancer is by blocking the initiation of carcinogenesis by inactivation of exogenous and endogenous genotoxic molecules including the reactive oxygen species. Another mechanism consists of inhibition and activity of carcinogen metabolizing enzymes, they activate phase 1 enzyme (cytochrome P450) to detoxify molecules procarcinogens. The study focuses on the anticarcinogenic activity of polyphenols and it has also discussed different pathways for chemo-preventive effect against cancer of various subclasses (flavonoids, lignin, stilbenes

and phenolic compounds) of polyphenols.



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