

Phytonutrients

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The term "Phyto" comes from the greek word for plant so phytonutrients are plant nutrients, though they are of a different class than the traditional nutrients of fats, proteins, vitamins and minerals. These are the chemicals that help plants defend against environmental challenges and appear to provide humans with protection against certain diseases as well increase overall health. They are highly nutritious active compounds within plants which promote good health. Phytonutrients, also referred to as phytochemicals; includes carotenoids, lutein, flavonoids, isothiocyanates, coumarins, saponins, indoles, isoflavones, inositol phosphates, lignans, organosulfurs, sulfides, terpenes and plant sterols.

More than 25,000 phytonutrients are found in plant foods. These compounds are believed to protect against certain cancers, heart disease and even vision loss due to macular degeneration. Carrots, green leafy vegetables, oranges and sweet potatoes, to name a few contain phytonutrients. In fact just one orange contains more than 170 phytonutrients.

A study published in the *Journal of the American Medical Association* said, consuming just three servings of fruits and vegetables, was linked to a 22% decreased risk of stroke. But overall, phytonutrients are said to help slow down the aging process and may protect against a host of illnesses and diseases like some cancers, heart disease, high blood pressure and other chronic health conditions. In addition, they could work to enhance immunity and serve as antioxidants.

Since many phytonutrients also serve as the pigment that gives foods their deep hues, for example, foods that are blue or purple like blueberries, blackberries and red cabbage (rich in flavonoids); yellow-orange foods like carrots, winter squash, papaya, and melon (rich in beta-carotene); red or pink foods like tomatoes, guava, and watermelon (rich in lycopene); and green foods like kale, spinach, and collard greens (rich in chlorophyll). Since not all phytonutrients give color, some off-white foods like garlic, onions, and leeks are rich in powerful sulfur-containing phytonutrients.

Biography

Ajay Prakash Gupta has completed his B.Pharm from Delhi University and M.Pharm from Panjab University, Chandigarh in 1982 and MBA studies from Indira Gandhi National Open University. A personable, result oriented and proactive Pharma Technocrat with more than 31 years experience in the pharmaceutical industry dependable and capable of leading the production and technical process in keeping pace with business and market goals of the Organization with exceptional organizational and administrative skills. While working at Dabur Research Foundation, a premier pharmaceutical research organization, he has had US & European patent in his name on hepatoprotective preparation. He has attended several national & international conferences including CPH I at Madrid, Spain. He has delivered guest lectures on Pharma & Management topics. Currently he is serving as VP Technical at Cachet Pharma (An Alkem group) since last 11 years.

Phytochemical investigation of main components from *Geum heterocarpum* Boiss

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The genus *Geum* is a perennial rhizomatous herb which belongs to the Rosaceae family. Five species of genus *Geum* exist in Iran. *Geum heterocarpum* Boiss. is an endemic one that grows in north, northeast, northwest and west of Iran. This plant was collected from Rouin village in Khorasan-e-Shomali province and been dried at an appropriate condition. Air dried roots (2 Kg) were crushed and extracted with EtOAc by percolation at room temperature to obtain EtOAc extract (25 g). The extract was subjected to silica gel Column Chromatography (CC) and the fractions were detected by Thin Layer Chromatography (TLC) and the isolated compounds were purified. The purified compounds were identified by their NMR, EIMS & IR spectral data. Altogether 8 compounds were purified and identified. They are 4 triterpenoids, 3 sterols and 1 aldehyde.

Biography

Amir Ehsan Badami has completed his M.Sc. at the age of 24 years from Pharmaceutical Sciences Branch of Islamic Azad University and he is studing Ph.D. at Tehran University School of Medicine.