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Flavonoid: As an anti-microbial drug

Gautam Patil

Natural Products Laboratory, Deptt. of Chemistry, Dr. H.S. Gour University, Sagar, (M.P.) - 470003, (INDIA)

E-mail: gautamchem23@gmail.com

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ABSTRACT

Flavonoids are widely used as an anti-microbial drug in biological cells. It also play very important role in metabolism process, immuno system and anti-biotic efficiency in animal cell. Flavonoid has found different form as flavone, flavonone, flavonol, isoflavone, anthocynines, anthocynidin and flavone glycosides.

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INTRODCUTION

Flavonoids are widely distributed in plants fulfilling many functions including producing yellow or red or blue pigmentation in flowers and protection from attack by microbes and insects. The widespread distribution of flavonoids, their variety and their relatively low toxicity compared to other active plant compounds (for instance alkaloids) mean that many animals, including humans. Insect significant quantities in their diet. Flavonoids have been referred to as “natures biological response modifies”, because of strong experimental evidense of their inherent ability to modify the bodies reaction to allergens, viruses, and carcinogens. They show anti-allergic, anti-inflammatory, anti-microbial, anti-oxidant and anti-cancer activity.

Flavonoids are an important class of plant based compounds Scientists have identified upwards of four thousand flavonoids the “bioflavonoids”, when used in supplements. This number may just be the tip of the iceberg as scientist believe the more compounds of this class still can be discovered in the plant world.

They are also found in high amounts in natural legumes, in grain as well as nuts. Flavonoids are considered to be very beneficial compound due to their po-

tent nature of anti-oxidant. In this role, certain types of flavonoids are considered to be for more powerful than the most common and vitamin C and Vitamin E at preventing cellular damage brought on by free radicals-unstable oxygen molecules which natural by products of metabolism.

BIOLOGICAL EFFECT

Consumers and food manufacturers have become interested in flavonoid for their medicinal properties, especially their potential role in the prevention of cancers and cardiovascular disease. The beneficial effects of fruit, vegetables and tea or even red wine have been attributed to flavonoid compounds rather than to known nutrients and vitamins.

Health benefits from anti-oxidant values

“Linus Pauling institute” has published a research in 2007. “Free radical Biology and Medicine” Indicate that inside the human body, flavonids themselves are of little or no direct anti-oxidant value.

According to Frei - We can now follow the activity of flavonoids in the body and one thing that is clear is that the body sees them as foreign compound and is

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trying to get rid of them.

The research also indicated that only small amounts of flavonoids are necessary to see these medicinal benefits.

Diarrhea

A study has shown that epicatechin, quercetin and luteolin can inhibit the development of fluids that result in diarrhea by targeting the intestinal cystic fibrosis transmembrane conductance regular Cl-transport inhibiting cAMP- stimulated Cl-secretion in the intestine.

Quercetin

Important flavonoids: Quercetin is a flavonoid and it is the glycone form of a number of other flavonoid glycosides, such as rutin and quercetin, found in circus fruit, buckwheat and Quercetin forms the glycosides quercetin and rutin together with rhamnose and rutinose, respectively. It may also help to prevent some types of cancer, however currently there is more research needed in this area.

Epicatechin: Epicatechin improves blood flow and thus seems good for cardiac health.

Proanthocyanidins: Proanthocyanidins extract demonstrate a wide range of pharmacological activity. Their effects include increasing intracellular vitamin C levels decreasing capillary permeability, fragility, scavenging

oxidant, free radicals and inhibiting destruction of collagen, the most abundant protein in the body.

Side effects and cautions

The use of flavonoids in supplements is not linked to any known side effects and there are no toxicities, adverse react related to the use of supplemental flavonoids to diets. They are quite safe.

Hesperidin

Hesperidin and rutin exert beneficial effects on capillary permeability and blood flow. They also exhibit some of the anti-allergic and anti-inflammatory benefits.

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