A Class of Polyphenolic Secondary Metabolites

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Introduction

Flavonoids are a group of plant metabolites believed to provide health benefits through cell signalling pathways and antioxidant activity. These molecules are found in various fruits and vegetables. Flavonoids are water-soluble polyphenol molecules with 15 carbon atoms. One of the carbons in this chain is attached *via* an oxygen bridge or directly to a gasoline ring carbon to form a third intermediate ring. They are essential pigments for creating the colours needed to attract pollinating insects. In higher plants, flavonoids are also required for UV filtering, nitrogen fixation, cell cycle inhibition, and as chemical messengers.

Description

Flavonoids secreted by plant roots support the symbiotic relationship between certain vegetables such as peas, clover and beans and rhizobia. Rhizobium present in soil produces He-Nod factors in response to the presence of flavonoids. These nicking factors are recognized by plants and induce specific responses such as ion flux and tuber formation. Some flavonoids inhibit certain spores and protect against certain plant diseases. Flavonoids are widely distributed in plants and are the most common type of polyphenolic compounds found in the human diet. Almost all fruits, vegetables and herbs contain flavonoids to some extent. They are also found in other foods such as dried beans, grains, red wine, green tea, and black tea. In general, the more colourful the food, the richer it is in flavonoids. The exception is the orange, in which the flavonoids in this fruit are mainly found inside the white fleshy substance of the skin. The best way to get enough flavonoids is to eat plenty of fresh fruits and vegetables each day and 4 servings of fruit. As for the consumption of red wine, it is recommended that a man drink no more than two glasses a day for him and one glass for women. Flavonoid supplements are also available, but those who purchase these should be aware that experts have not verified the ideal amount of flavonoids and overdosing can actually be harmful. There is. Flavonoids are a wide range of phytochemicals with different metabolic functions in plants. The elucidation of the biosynthetic pathways and their regulation by MYB, basic helix-loop-helix and WD40-type transcription factors has enabled manipulation of plant metabolism through manipulation of various end-products with valuable applications.

Conclusion

This review describes the regulation of flavonoid biosynthesis and the biological functions of flavonoids in plants. B. Protection against infection, nodule and pollen fertility by UV-B radiation and pathogens. In addition, we describe various strategies and outcomes from genetic engineering of flavonoid biosynthesis to influence industrial and microbial combinatorial biosynthesis by restructuring pathways for mass uptake of specific compounds. Bilberry is a plant native to Northern Europe and is also called European bilberry, bilberry, cranberry, bilberry, and blueberry. Its botanical name is *Vaccinium myrtillus L.* The blueberry fruit resembles North American blueberries in appearance. Blueberries are high in chemicals called anthocyanins, which give them their colour. Health experts believe they offer many health benefits. A diet high in flavonoid-rich foods such as berries, apples, tea, and red wine was associated with a lower risk of death in people with Parkinson's disease.