of cancer. Beyond their antioxidative properties, flavonoids possess many beneficial roles, such as deactivating carcinogens, inhibiting the expression of mutated genes, deactivating the carcinogenesis-promoting enzymes and also promoting detoxification of xenobiotics (Kris-Etherton et al. 2002).

Isoflavones, lignans and stilbenes are phytoestrogens, a group of nonsteroid plant constituents that elicit an oestrogen-like biological response (Murphy and Hendrich 2002).

Isoflavones. Isoflavones are found in just a few botanical families. Although present in several other legumes, soybeans are well-known to be a principal dietary source. Isoflavones, genistein and daidzein, with their β-glucosides, are present in up to 3 mg/g of soybean (Price and Fenwick 1985).

Anthocyanidins. Anthocyanidins are water-soluble flavonoids that are aglycones of anthocyanins. The naturally occurring, principal anthocyanidins are pelargonidin, cyanidin, paeonidin, petunidin, delphinidin and malvidin. These naturally occurring compounds are among the principal pigments in fruits and flowers. The colours of these pigments are greatly influenced by the pH and metal ion complexes. Like other flavonoids, anthocyanidins act as antioxidants in *in vitro* conditions and are also expected to have antioxidative and anti-mutagenic properties *in vivo*. However, they have potent antioxidant activity in isolated anthocyanidins (aglycons and glycosides) extracts from plants (Haslem and Lilley 1998).

Catechins and Gallic Acids. The major sources of catechins are grapes, berries, cocoa and green tea. Tea contains considerable quantity of gallic acid esters, like epicatechin, epicatechin gallate and epigallocatechin gallate. Numerous studies have suggested that the protective benefits provided by these components were due to their free radical scavenging ability (Hanasaki et al. 1994), their inhibition of eicosanoid synthesis (Moroney et al. 1988) and platelet aggregation (Pace-Asciak et al. 1995). On the basis of experimental evidence in cell culture systems, animal models, as well as epidemiological evidence, Gupta et al. (1999) support the possible use of tea, especially green tea, for prevention of prostate cancer. However, Hollman et al. (1999) regard the question of flavonol protection against cardiovascular disease and cancer as remaining open. In wines, catechins and procyanidins are involved in the astringency sensation (Haslam and Lilley 1988). Catechin is one of the prime phenolics present in grapes and red wines, and is considered to be responsible for the protective effect of red wine against atherosclerotic cardiovascular disease. Donovan et al. (1999) measured catechin and catechin metabolites in the plasma of human subjects following consumption of both alcoholised and dealcoholised red wine. Sulfate and sulfate± glucuronide conjugates, but little free catechin, were present. The metabolites/conjugates of catechin were eliminated from blood with a half-time of approximately 4 h. These data confirmed that the grape polyphenolic flavonoid catechin is well absorbed, but rapidly metabolized and conjugated. The results suggest that the physiological properties of the metabolites in blood and tissues may be more important than the parent compounds found in plants.

Stilbenes. Stilbenes are 1,2-diaryl ethenes that are biosynthesized from cinnamic acid derivatives. They are commonly present in liverworts and plants with higher monomeric, dimeric, trimeric and polymeric (viniferins) forms (Gorham 1989). Amongst