

Carotenoids a Biologically Important Bioactive Compound

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Abstract : Carotenoids comprise a group of isoprenoid pigments. Carotenes, xanthophylls and their derivatives have been found to play an important role in all living beings through foods, nutraceuticals and pharmaceuticals. α -carotene, β -carotene and β -cryptoxanthin play a vital role in humans to provide vitamin A source for the growth, development and proper functioning of immune system and vision. They are very crucial for plants and humans as they protect from photooxidative damage and are excellent antioxidants quenching singlet molecular oxygen and peroxy radicals. Diet including more intake of carotenoids results in reduced threat of various chronic diseases such as cancer (lung, breast, prostate, colorectal and ovarian cancers) and coronary heart diseases. The blue light filtering efficiency of the carotenoids in liposomes have been reported to be maximum in lutein followed by zeaxanthin, β -carotene and lycopene. Lycopene plays a vital role for the protection from CVD. Lycopene in serum is directly related to reduced risk of osteoporosis in postmenopausal women. Carotenoids have major role in the treatment of skin disorders. There is need to identify and isolate novel carotenoids from diverse natural sources for human health benefits.

Keywords : antioxidants, carotenoids, nutraceuticals, osteoporosis, pharmaceuticals

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