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Almighty Astaxanthin: Over view on nutraceutical based approach to aim to combat cancer

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Nutraceuticals are a part of dietary prospect that play key role to improve health and reduce various diseases. Globally cancer is the second leading cause of death. Astaxanthin is a natural nutraceutical found in sockeye salmon, lobster, shrimp, crawfish, crabs and salmon roe, etc. It is a xanthophylls red color carotenoid responsible for red pigmentation in animals. It provides a wide range of applications in medicinal, agricultural, pharmaceutical, nutraceutical and cosmetic industries owing to their consumed acceptance of commercial products. The Food and Drug Administration of the United States has permitted to extensively use as feed additives for fish, lobsters, shrimp and chickens. However natural antioxidants are promising compounds to human metabolites which can facilitate the studies on identification of mechanism in reduction of toxicities due to free radicals in many degenerative diseases. Furthermore, the antioxidant activity of astaxanthin is 10 times more than β -carotene and 100 times more than α -tocopherol. It also been shown to boost immune system, improves reproductive health, regulates blood pressure, prevent chronic diseases like Alzheimers's and Parkinson's, controls prostate problems, suppress tumor growth, attenuates metastasis and inhibits key enzymes in cancer. Therefore, astaxanthin is most effective nutraceutical compound which react rapidly with free radicals that can minimize toxicity. Hence, developments in nutraceuticals have provided new tools in cancer therapy.

Biography

K Prameela completed her PhD from Andhra University in Biochemistry. She is working as an Assistant Professor in Department of Biotechnology, GIT, GITAM University. She has published more than 12 papers in reputed national and international journals. She has been awarded with young scientist fellowship.

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