

0019

## **A review on the role of Phytosterol enriched food in anticancer activity**

Anup Ghosal

*PRABHU JAGATBANDHU COLLEGE under University of Calcutta*

### **Abstract**

Phytochemicals have been proposed to offer protection against a variety of chronic ailments including cardiovascular diseases, obesity, diabetes, and cancer. As for cancer protection, it has been estimated that diets rich in phytochemicals can significantly reduce cancer risk by as much as 20%. Phytosterols that are found exclusively in plants are absorbed from the diet in small but significant amounts. This phytosterol is found in different plants. As natural constituents of plant structures, phytosterols contribute to the regulation of the fluidity and permeability of cell membranes. They are found mostly in vegetable oils, fruits, nuts, cereals and legumes. The most abundant phytosterols are  $\beta$ -sitosterol, campesterol and stigmasterol. During the last 15 years the market for phytosterols, as dietary supplements, has led to a rapidly growing worldwide market for functional foods containing phytosterols. Epidemiological data suggest that the phytosterol content of the diet is associated with a reduction in common cancers including cancers of the colon, breast, and prostate. The means by which dietary phytosterols may be achieving these effects is becoming clearer from studies with tumorigenic research models. Phytosterols affect host systems potentially enabling more robust antitumor responses, including the boosting of immune recognition of cancer, influencing hormonal dependent growth of endocrine tumors, and altering sterol biosynthesis. In addition, phytosterols have effects that directly inhibit tumor growth, including the slowing of cell cycle progression, the induction of apoptosis, and the inhibition of tumor metastasis. This review summarize the anti-cancer effect of phytosterol enriched food.

### **Funding and Conflicts of Interest**

None