

Role Tulsi in Colon Cancer

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Abstract: Colon (Colorectal) cancer is one of the utmost dangerous cancer in both males and females. The mortality rate is quite high and it is been over 6 lakhs people per annual worldwide. Drug therapy for patients with cancers can lead to serious side effects and spends high economic cost. However, Anti-melanoma activity of 50% alcoholic aqueous leaf extract of different species of *Ocimum*, which is managed orally (200mg/kg, p.o.) resulted in significant reduction in tumor volume, increase in average body weight, and survival rate of mice. Herbal anti-cancer compounds are unique in their feature of having anti-oxidant and immunostimulant activity preventing cancer growth indirectly along with a direct cytotoxic effect towards malignant and/or other apoptotic cells. *Ocimum sanctum* is beneficial against the stress and depression during tumour. The anti-cancerous activity of *Ocimum Sanctum* in several cancers such as lung, skin, oral, colon, cervical, gastric, breast and prostate is noteworthy.

Keywords: Colon (Colorectal) cancer, *Ocimum sanctum*, Anti-melanoma activity, anti-oxidant, cytotoxic effect

Introduction

Colorectal (Colon) cancer is a global health issue that affects all parts of world. This is considered as one of the most common cancer in the world (Rattanamanerumee *et al.*, 2018). Colorectal cancer is the 3rd most diagnosed cancer in males and the second in females worldwide (Hou *et al.*, 2013). Smoking, overweight, physical inactivity, obesity, red and processed meat consumption, and excessive alcohol consumption are risk factors for this kind of cancer. Additionally, it is also reported through epidemiological studies that stress, chronic depression, and other psychological factors might influence cancer onset and progression. Meanwhile, the death from patients with colon cancer have been over 6 lakhs people per annual worldwide. Colon cancer, also known as rectal cancer starts from abnormal growth of colon or rectum inner wall that lead to the developing of

malignant tumors or adenocarcinoma (Yang *et al.*, 2018). Treatment for colon cancer is by surgery combined with anti-cancer drug treatment to eliminate any remaining of tumorigenic cells. However, drug therapy for patients can lead to serious side effects and spends high economic cost. Therefore, prevention is always better than cure. Medicinal plants are of interest as alternative medicine for cancer treatment and prevention. Past studies have reported that natural compounds could be possibly used for treatment and prevention of colon cancers. Among various natural components Tulsi is been widely used by several researchers.

Tulsi

Ocimum sanctum is a member of family Lamiaceae. Tulsi means “*Matchless one*”. Also, known as “*Queen of Herbs*”. It is one holiest plant, which have