

Potent Anticancer Medicinal Plants

Secondary Metabolite Profiling,
Active Ingredients, and
Pharmacological Outcomes



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CHAPTER 3

The Anticancer Activity of *Nigella sativa* on Hepatocellular Carcinoma

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ABSTRACT

Nigella sativa L. is a medicinal seed, commonly used as spice in many Indian cuisines including pickles, sauces, pulao, lentils, and vegetables. Its seed is a rich storehouse of several medicinal bioactive compounds, of which thymoquinone and thymol are the dominant ones. It has been shown to be highly effective in almost all the ailments and disorders. Since it is used in food, it is an important nutraceutical product and a source of dietary antioxidants. Hepatocellular carcinoma is among the leading cancers all around the globe and its mortality rate is very high. Besides, there is no treatment in advanced stages and whatever treatments are available, they show severe side effects. Several natural products have shown effects on hepatocellular carcinoma as both preventive and curative drugs. *N. sativa* has been explored extensively as an antihepatocellular cancer agent and it has a high potential to inhibit the growth. The studies have shown that *N. sativa* has a prospective effect against liver reperfusion and also on cholestatic liver damage; therefore, it could be a powerful cancer preventive agent. The researchers have given several mechanisms of its action on liver cancer cells. The receptors present on the liver cancer cells have been targeted to develop drugs. There is a huge scope