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Title of Thesis: Biochemical studies on the effect of blue-green algae extracts and other substances as anti-neoplastic agents in experimental animals
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ABSTRACT

Ehrlich Ascites Carcinoma (EAC) is one of the most common experimental tumors models. *Spirulina* may significantly contribute to the inhibition of cancer owing to its modulation of the immune system's abilities and its antioxidant qualities. Traditional medicine views Curcumin Nanoparticles (Cur-Nps) as a helpful medicinal agent and believes it to have no significant side effects. The current study was performed to estimate the antitumor activities of *Spirulina platensis* (SP), Cur-Nps, and both of them against EAC in Swiss albino mice. 110 male mice were allocated randomly into 11 groups of ten mice each. group I: control; group II: mice received SP; group III: mice received Cur-Nps; group IV: mice received both SP and Cur-Nps; group V: EAC group; group VI: SP protective (Pr) group; group VII: SP therapeutic (Tr) group; group VIII: Cur-Nps Pr group; group IX: Cur-Nps Tr group; group X: SP& Cur-Nps Pr group; group XI: SP& Cur-Nps Tr group. In comparison to the EAC group, the administration of Cur-Nps alone or in combination with SP resulted in a significant reduction in serum levels of MDA, ALT, AST, creatinine, and urea and a marked increase in TAC levels. Additionally, SP and Cur-Nps enhanced the hematological profile, improved liver and kidney histology, and resulted in a significant reduction in P53 immunohistochemical expression. In conclusion, our study concluded that, SP and Cur-Nps have potent antioxidant and apoptotic properties. They also enhance the histological and immunohistochemical alterations in the tissues of the liver and kidney, as well as their functions.

The summary not more than 500 words