The Cure in a Algae: Arthrosphira spirulina as a Suppresive Substance of Cell Line SKOV3 of Ovarian Cancer through Photodynamic Technique

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Cancer is one of the main causes of morbidity and mortality in the world. Among the types of cancer, ovarian cancer has the lowest prospect of survival of all female cancers, with survival rates ranging between 30% and 50%. Therefore, research toward alternative treatments that have minimal effect on the quality of life regarding the patient and are cost-effective is increasing. In this research, the effectiveness of algae Arthrosphira Spirulina as a suppressive substance of cell growth for the treatment of ovarian cancer (SKOV3 cell line) through the photodynamic technique was determined. Concentrations of 3.0g/mL, 1.5g/mL and 0.75g/mL were managed in three experimental groups and compared to 2 control groups for the 24h and 48h time points. With a Trypan Blue assay and variations in morphology the efficacy or toxicity of the solution was determined. The experimental groups showed changes in morphology and adherence indicative of cell death; and the control groups showed invasive characteristics, rapid cell growth and resistance to several cytotoxic drugs. According to the Trypan Blue assay the concentrations of 1.5g/mL (average viability=44.2%) at 24h, and at 48h the concentration of 3.0g/mL (average viability=40.0%), were the more efficient. The hypothesis was accepted, the combination of the electro-luminescent diode and the A. spirulina produced a photodynamic technique altering the optimal conditions for the proliferation of ovarian cancer cells. This is why the use of A. Spirulina is an alternative method for treating ovarian cancer, which provides effectiveness and ensures cost effectiveness to the patient.

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