

INFLUENCE OF FUNGAL DERIVED CAMPTOTHECIN ON THE CELL CYCLE ANALYSIS OF CERVICAL CANCER CELL LINE (HELA)

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ABSTRACT:

Cancer is one of the major health problems worldwide and its current treatments have a number of undesired adverse side effects. In the past two decades, many valuable bioactive compounds with antimicrobial, insecticidal, cytotoxic, and anticancer activities have been successfully discovered from Natural compounds. Currently, a few of them are being used to treat cancer. Some endophytes fungi are have the ability to produce the same or similar bioactive compounds as those originated from their host plants. Camptothecin (CPT), the third largest anticancer drug, is produced mainly from *Camptotheca acuminata* and *Nothapodytes foetida*. In the present study is focussed to develop Camptothecin from endophyte Fungi and to elevate their potential anti-cancer properties against Hela cervical cancer cells. Cervical cancer cells were treated with the isolated camptothecin and its effect was analysed using the cell cycle analysis. From the investigation the cytotoxic properties against cervical cancer and anticancer activities have been successfully discovered from endophytic fungi. Thus appears to display potent antitumor activity against human cancer via the induction of apoptosis, and may be a useful to develop alternative drug for different cancer therap.

KEY WORDS: Bioactive compounds, Fungi derived Camptothecin, Cervical cancer, HeLa Cell Lines, Anti-Cancer.

INTRODUCTION:

Cancer is a widespread disease. Cancer is uncontrolled growth of cells. It can affect almost any part of the body. The growth often invades surrounding tissue and can metastasize to distant sites (WHO, 2011). Cancer is caused by mutations in the DNA. Normal cells repair the mutation or simply die when a mutation occurs whereas cancerous cells continue to survive with the mutations and they grow in an uncontrolled manner until a mass of cells known as tumor is created. Often the tumor interferes with the normal functioning of healthy