

## **Cytotoxic Assessment of Extracted Fractions of Sea Cucumber *Holothuria parva* on Cancer Cell Line (MCF7) and Normal Cells**

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### **Abstract**

Sea cucumbers belong to Echinodermata phylum and Holothuroidea class that include a wide range of marine animals with approximately 1400 species worldwide. So far, the presence of bioactive compounds with antioxidant, antibacterial, antifungal, antiviral and anticancer effects from sea cucumbers has been reported in many research publications. In this research, cytotoxic effects of *Holothuria parva* extracts and fractions of solvents with different polarity (such as Hexane, Chloroform, Methanol, ddH<sub>2</sub>O) were studied using cancerous cell line MCF-7 (Breast cancer). Cytotoxicity effects of separated fractions in three independent times (24, 48, 72 Hour) and IC<sub>50</sub> values (in range of 0.5-0.00001mg/mL) were evaluated. The best effect between fractions belonged to aqueous fraction and on the MCF-7 cell line in the 72 hour. Therefore, after purification, bioactive compounds derived from this species could be used as a drug candidate for producing anticancer agents.

Keywords: *Sea cucumber*, *Holothuria parva*, *Cytotoxicity detection*, *Cell Line*, *Persian Gulf*.

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