

Antiproliferative Potential of Extracts from Kappaphycus Seaweeds on HeLa Cancer Cell Lines

ABSTRACT

A review of the current literature indicates that natural seaweeds are an excellent source of bioactive compounds with antioxidant, antimicrobial and antitumor properties. In the present study, 90% methanolic, 70% acetonic and aqueous extracts from *Kappaphycus alvarezii* (strains Crocodile, Giant and Brown) and *Kappaphycus striatum* were used to inhibit the growth of HeLa cell lines. MTS assay was carried out to determine the proliferation of HeLa cells in the presence of different seaweed extracts. Both 500 µg/mL of aqueous and methanolic extracts from *K. striatum* demonstrated highest anti-proliferative activity against HeLa cells with cell growth inhibition of 53.5 and 43.7%, respectively. Treatment with the aqueous extracts from three strains of *K. alvarezii* did not show any growth inhibition against HeLa cell lines. The acetonic extract of *Kappaphycus* seaweeds exhibited a very poor cell growth inhibition with inhibitory activity observed under the treatment of 300 to 500 µg/mL of *K. alvarezii* strain Brown only. Further studies are suggested to identify and purify the specific anti-tumoral compounds for potential use in cancer therapy.