Effects of a Sulfated Polyssacharide Fraction from *Solieria filiformis* on the Cell Viability *in vitro*

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Sulfated polysaccharides (SP) are complex macromolecules found in high concentrations in seaweeds and present many biological properties. The aim of this study was to analyze the effects of a sulfated polysaccharide fraction from the red seaweed *Solieria filiformis* (SP-Sf) on the cell viability of Vero, HeLa and C6/36 cells. SP-Sf was obtained by enzymatic digestion (papain), followed by ion exchange chromatography on DEAE-cellulose. The effect of SP-Sf in cell viability was determined by two methods. Initially, by the morphological change, where the cells were treated with serial dilutions of the SP-Sf from 500 to 7.8 µg/ml, using culture medium without fetal bovine serum as a diluent, incubated for at 37°C with 5% CO₂ atmosphere. After 2 (Vero), 4 (HeLa) or 7 days (C6/36), the cells will be observed in inverted optical microscope and compared with the control (no substance, only cells). The highest concentration of substance that did not alter the cellular morphology was called maximum non-toxic concentration (MNTC). After that, it was incorporated the neutral red dye by living cells with subsequent quantification by a spectrophotometer at a wavelength of 492 nm. The results showed that SP-Sf in the highest concentration (500 µg/ml) presented a cell viability of 77.9% on Vero cells, 69.6% on HeLa cells at concentration of 250 µg/ml and 60.6% at concentration of 15.6 µg/ml on C6/36 cells. Thus, the results showed that the SP-Sf did not present any citotoxicity on Vero, HeLa and C6/36 cells in these concentrations.

**Word Keys:** cell viability, sulfated polysaccharide, *Solieria filiformis*

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