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Polysaccharides from marine organisms as therapeutic agents

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Over the years, as the world tries to find more sustainable means to produce goods for consumers, the science field has also taken similar approaches. As the tendency to apply natural products in medicine increases, researchers are greatly focusing on marine organisms to derive health benefits. These include micro-algae, macro-algae and cyanobacteria. Over the past few decades, various literature has elaborated on the health benefits of using polysaccharides derived from marine organisms in food and as drug carriers, especially from brown, red and green seaweed. These polysaccharides can be artificially produced through cell cultures in a laboratory and also by direct extraction of polysaccharides directly from the living organism. There are various beneficial biological activities demonstrated by crude polysaccharides and their derivatives. This includes preventing the formation of dangerous blood clots and improving the immune system response concerning a greater stimulation of antibody production. It also possesses antitumour properties and provides cancer preventative action by recruiting tumour suppressors or natural cell killers. Marine algae are vast in variety, exceptionally productive and chemically unique, therefore offering excellent scope for the identification of new anticancer drugs. Additionally, marine flora is rich in various chemicals that exhibit medicinal properties. The cultivation of the algae has promoted so many medical benefits and acts as an improved modern medical technique for the production of therapeutic agents. Hence more focus should be given to the cultivation of these marine organisms and ripping benefits out of them.

Keywords: Polysaccharides, Medicine, Marine drug, Algae, Immunity, Natural

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