



Marine Algae: An Extensive Review of Medicinal & Therapeutic Interests

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ABSTRACT

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The global economic impact of the five leading chronic diseases — cancer, diabetes, mental illness, CVD, and respiratory disease — could reach \$47 trillion over the next 20 years, according to a study by the World Economic Forum (WEF). According to the WHO, 80% of the world's population primarily those of developing countries rely on plant-derived medicines for healthcare. The purported efficacies of seaweed derived phytochemicals are showing great potential in obesity, T2DM, metabolic syndrome, CVD, IBD, sexual dysfunction and some cancers. Therefore, WHO, UN-FAO, UNICEF and governments have shown a growing interest in these unconventional foods with health-promoting effects. Edible marine macro-algae (seaweed) are of interest because of their value in nutrition and medicine. Seaweeds contain several bioactive substances like polysaccharides, proteins, lipids, polyphenols, and pigments, all of which may have beneficial health properties. People consume seaweed as food in various forms: raw as salad and vegetable, pickle with sauce or with vinegar, relish or sweetened jellies and also cooked for vegetable soup. By cultivating seaweed, coastal people are getting an alternative livelihood as well as advancing their lives. In 2005, world seaweed production totaled 14.7 million tons, which have more than doubled (30.4 million tons) in 2015. The present market value is nearly \$6.5 billion and is projected to reach some \$9 billion in the seaweed global market by 2024. Aquaculture is recognized as the most sustainable means of seaweed production and accounts for approximately 27.3 million tons (more than 90%) of global seaweed production per annum. Asian countries produced 80% for world markets where China alone produces half of the total demand. The top six seaweed producing countries are China, Indonesia, Philippines, Korea, and Japan.