Measurement of Antibiosis of Algae From the Chilean Intertidal Zone on Pathogenic ATCC Bacteria

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Seaweeds provide food, habitat, and shelter for a variety of marine organisms. They have properties that allow them to regulate the absorption of CO2 and the trophic scale in the ocean. In Chile there are approximately 800 species of seaweed, however, the threats of climate change and the massive extraction of the Chilean marine forest, allow a detachment of algae from the intertidal zone in a natural way, causing their accumulation in the coastal line. Regarding this last issue is that this project shows the antibacterial effect of seaweeds collected from the coastal line of the phyla Phaeophyta, Chlorophyta and Rhodophyta from Chilean intertidal zone against ATCC gram positive and negative bacterial pathogens. We prove seaweed extracts from Lessonia trabeculata, Lessonia spicata, Durvillaea incurvata, Mazzaella laminariodes, Ulva sp. and Nothogenia sp. in pathogen bacteria: Escherichia coli ATCC 25922, Pseudomonas aeuroginosa ATCC 27853, Klebsiella pneumoniae ATCC 700603, Enterococcus faecalis ATCC 29212, Staphylococcus xylosus ATCC 29971 using MSA, MacConkey and Müller-Hington agar. Lessonia trabeculata, Lessonia spicata and Durvillaea incurvata showed a major inhibition for Staphylococcus xylosus and Pseudomonas aeuroginosa compared to traditional antibiotics. This research proposes an innovative solution for the elaboration of a natural antibiotic that generates less resistance to pathogenic bacteria with a low pharmacological cost, with multiple therapeutic applications being less invasive for the humans. Key words: ATB´s, Antibiosis, Seaweed, ATCC, Bacteria

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