

The Biological Function of Exopolysaccharide (EPS) and Its Application in Aquaculture

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Abstract

Aquaculture is one of the fastest-growing food producing sectors. It provides more than 50% of fish products for human consumption. However, diseases have become the major issue to block the sustainable development of aquaculture. Antibiotics treatment is usually used in the fish farming to prevent disease outbreaks or for therapeutic purpose. However, abuse of antibiotics not only cause of environmental pollution, but also cause risk of human food safety. Exopolysaccharides (EPS) as immunostimulants is a popular prophylactic strategy for disease control in aquaculture. In the last few decades, natural polymers can be derived a wide variety of sources, from plant, animals and microorganisms. Those with varied carbohydrate compositions possess a plenty of beneficial properties have gained much attention among scientific communities owing to their therapeutic potential. Different source have unique behavior in expressing their capability to display significant health promoting characteristics in the form of polysaccharides. The used EPS can be considered as a good source of natural functional aqua feed ingredients in aquaculture to promote on growth performance, innate immunity and disease resistance in aquaculture.

Keywords: exopolysaccharide (EPS), growth performance, innate immunity, disease resistance

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