



The application and importance of nanotechnology in the prevention and management of white spot syndrome virus (WSSV) in aquaculture

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Abstract

The climate is more important in global food production as a result, due to the potential impact of the environment, freshwater is important in controlling the disease in terms of aquatic health and the health of the oceans. Nanotechnology is advanced technology to reduce or control the diseases, which is available in the form of nanoscale materials in new products or processes. There are opportunities for the use of existing nanotechnology for the fisheries and aquaculture industries and for the development of new applications specific to the industry. Nanotechnology has already been applied in the food industry, Applications for fisheries can include Nano polymers and coating to strengthen food packaging, for the protection of fine fish fillets. The cell life of fish and shellfishes can be improved by using anti-bacterial noncotting and transparent polymer films that help remove oxygen from food. Nano sensor on Food packaging can also be used to report the decline of fish or shellfishes. Among the various shrimp viral pathogens, the white-spot spot syndrome virus (WSSV) is highly contagious and is sensitive to huge losses in the shrimp culture industry. In this review, the application of nanotechnology in the management of WSSV in aquaculture is discussed in detail. The use of nanocrystals in the formulation as well as the distribution of antigens and adjuvants with many. Additional approaches that may be related to their size, shape, surface transformation facilities, ability to co-distribute with antigen, and so on. Where a number of products could be rolled out in the future for field testing that could explore their use in the identification, treatment and prevention of WSSV in aquaculture.

Keywords: Nanotechnology, white spot, aquaculture