

METHOD FOR CONTROLLING INFECTIOUS DISEASES
IN FISH AND OTHER AQUATIC LIFEFORMS
IN A CLOSED CULTURE SYSTEM

Abstract of the Disclosure

A novel method is described for controlling infectious diseases in fish and other aquatic lifeforms whether freshwater or marine/brackishwater, and regardless of the developmental stage, in a closed culture system. The method consists of two or multi-tanks, which are connected with PVC pipes with a pump and a filter so that water is continuously recirculating among the tanks. Fish which are pre-injected with vaccines prepared from pathogenic parasites, bacteria, viruses or fungi were referred to as pre-immunized fish and were kept in one tank, while the remaining tanks were used to keep naive (normal, non-infected) fish or fish infected with pathogenic organisms. The method provides a relatively pathogen-free aquatic environment in which pathogens are kept in check by fish pre-immunized against those pathogens. The protective substance is antibodies which are continuously being released from the pre-immunized fish into the water in increasing quantities as long as the same or cross-reactive pathogens are still present. The method works by removing, or suppressing the population of the same pathogens in the water, thereby preventing infection or further infection. The method has demonstrated its effectiveness of using fish pre-immunized with *Ichthyophthirius* or *Aeromonas* not only in maintaining naive fish free from infection but also in facilitating the rapid recovery of fish infected with parasitic protozoan diseases or the gill- and fin-rot diseases. The method should work for other diseases caused by known pathogens. The pre-immunized fish will be a freshwater species if the aquatic lifeforms to be protected against those pathogenic diseases concerned are freshwater. Similarly the pre-injected with fish will be a marine/brackishwater species of the aquatic lifeforms to be protected are marine/brackishwater.