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Efficacy of edwardsiella tarda, streptococcus iniae, strpetococcus parauberis, vibrio anguillarum, and tenacibaculum maritimum combined vaccine for cultured olive floundery

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Edwardsiellosis, Streptococcosis and Vibriosis lead to extensive losses in aquaculture worldwide. Especially, *Vibrio anguillarum*, *Streptococcus parauberis* and *Tenacibaculum maritimum* are the most important causative agents among the bacterial pathogens in Olive flounder aquaculture and their infections increased steadily in Korea. Fish vaccine has been commercialized since 2006, however, only *S. iniae* and *E. tarda* vaccine is available for olive flounder at present in Korea. In this study, we evaluated the efficacy of combined vaccine against *E. tarda*, *S. iniae*, *S. parauberis*, *Vibrio anguillarum*, and *Tenacibaculum maritimum* in cultured olive flounder. The fish divided five groups for each bacterial pathogen. One hundred fish were injected intraperitoneally with 0.1mL per fish and the other one hundred were injected with sterile PBS with same method. At 3 weeks after vaccination, all fish were divided 5 groups evenly and challenged with 5 pathogenic bacteria strains including *E. tarda*, *S. iniae*, *S. parauberis*, *Vibrio anguillarum*, and *Tenacibaculum maritimum*. Relative percentage of survival (RPS) after challenge was calculated by checking the accumulated mortality of each group for 21 days. RPS was 80%, 85%, 75%, 90%, and 85% against *E. tarda*, *S. iniae*, *S. parauberis*, *Vibrio anguillarum*, and *Tenacibaculum maritimum* respectively. This study demonstrated that the combined vaccine induced protective efficacy in olive flounders from virulent bacterial challenge.

Biography

Bo-Kyu Kang has completed his Ph.D at the age of 35 years from Seoul National University. He is senior researcher of Research Unit of Green Cross Veterinary Products, which is animal vaccine company in Korea. He has published 27 papers in reputed journals and serving as a penal of Korea Institute of Planning and Evaluation for Technology in Food, Agriculture, Forestry and Fisheries.