World Academy of Science, Engineering and Technology
International Journal of Biomedical and Biological Engineering
Vol:9, No:02, 2015

Detection of Tetracycline Resistance Genes in Lactococcus garvieae Strains Isolated from Rainbow Trout

Authors : M. Raissy, M. Shahrani

Abstract : The present study was done to evaluate the presence of tetracycline resistance genes in Lactococcus garvieae isolated from cultured rainbow trout, West Iran. The isolates were examined for antimicrobial resistance using disc diffusion method. Of the 49 strains tested, 19 were resistant to tetracycline (38.7%), 32 to enrofloxacin (65.3%), 21 to erythromycin (42.8%), 20 to chloramphenicol and trimetoprim-sulfamethoxazole (40.8%). The strains were then characterized for their genotypic resistance profiles. The results revealed that all 49 isolates contained at least one of the tetracycline resistance genes. Tet (A) was found in 89.4% of tetracycline resistant isolates and the frequency of other gene were as follow: tet (E) 42.1%, tet (B) 47.3%, tet (D) 15.7%, tet (L) 26.3%, tet (K) 52.6%, tet (G) 36.8%, tet (34) 21%, tet (S) 63.1%, tet (C) 57.8%, tet (M) 73.6%, tet (O) 42.1%. The results revealed high levels of antibiotic resistance in L. garvieae strains which is a potential danger for trout culture as well as for public health.

Keywords : Lactococcus garvieae, tetracycline resistance genes, rainbow trout, antimicrobial resistance
Conference Title : ICVBS 2015 : International Conference on Veterinary and Biomedical Sciences
Conference Location : Istanbul, Türkiye
Conference Dates : February 16-17, 2015