



***Pseudomonas psychrophila*, a new pathogen causing disease in cultured rainbow trout (*Oncorhynchus mykiss*)**

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Abstract:

This study reports the first *Pseudomonas psychrophila* infection in rainbow trout (*Oncorhynchus mykiss*). A disease outbreak occurred during the fall of 2017 in a rainbow trout farm of north of Iran. Anorexia, lethargy and mortalities 10% fish per week were observed in rainbow trout weighting 45-107g in three fresh water ponds. The fish showed external signs of dark pigmentation, exophthalmia, and hemorrhage at the base of the fins and tissues damage. Internal signs were enlarged spleen, pale liver and intestine filled with yellowish fluid. Kidney and liver of diseased fish were aseptically streaked on MacConkey and sheep blood agar. Cultured bacterial 16S rRNA gene was sequenced. Causative bacteria were identified as *pseudomonas psychrophila* using morphological and biochemical characteristics and genotypic method based on 16S rRNA gene. *Pseudomonas psychrophila* is sensitive to colistin, fluoroquinolone antibiotics (enrofloxacin, difloxacin, danofloxacin), and aminoglycosides (kanamycin, streptomycin, neomycin, gentamycin).

Keywords: *Pseudomonas psychrophila*, *Oncorhynchus mykiss*, Fish disease, Iran