Systemic Mycobacteriosis Caused by *Mycobacterium marinum* in Farmed Meagre (*Argyrosomus regius*), in Turkey

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Abstract

This paper describes systemic mycobacteriosis caused by *Mycobacterium marinum*, in farmed meagre (*Argyrosomus regius*), in Turkey. Infected two year old fish showed signs of stunted growth, emaciation, slight ascites and exophthalmia, pale gills and significant mortalities. Only one fish sample showed hemorrhagic ulcerative skin lesions at the base of the caudal fin. Internal multifocal white colored granulomas in the spleen, kidney, and liver were observed. Ziehl-Neelsen (ZN) and Gram stained fresh squash mounts of the granulomas revealed Gram and ZN positive rods. Inoculation of sterile homogenates of the visceral organ granulomas on Lowenstein-Jensen slants produced slow-growing (3-4 weeks), yellow to orange colored, photochromogenic acid fast colonies. ZN positive bacterial isolates were identified using commercially available line probe assays (Genotype Mycobacterium CM/AS assay) and hsp65 gene sequencing analyses. According to molecular analysis results, the isolates were identified as *Mycobacterium marinum*. Epithelioid cell granulomas were microscopically observed in the visceral organs and gills. ZN stained tissue sections exhibited heavy acid-fast rods within the granulomas.

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