



## Research number (2)

# Experimental infection of atypical *Aeromonas salmonicida* in Nile tilapia *Oreochromis niloticus* and its treatment with carvacrol and cymene mixture

**Fatma Mostafa Mohamed Korni**

*Fish Department, Faculty of Veterinary Medicine, Beni-Suef University, Egypt*

한국어병학회지 제28권 제3호 (2015)

Journal of Fish Pathology, 28(3): 145-155. (2015)

### Abstract

The pathogenicity of atypical *Aeromonas salmonicida* was studied in healthy *Oreochromis niloticus*. Inoculum at concentration of  $1.5 \times 10^8$  CFU/ml and  $3 \times 10^8$  CFU/ml was injected into healthy fish through intramuscular and intraperitoneal injections. Experimentally infected *Oreochromis niloticus* showed ulceration at the dorsal musculature and trunk region in addition to black coloration, congested gills, exophthalmia, and ocular hemorrhage. Congested liver and kidney were recorded in post-mortem examination. Mortality of the experimentally infected *Oreochromis niloticus* reached 100% after intramuscular injection at concentration of  $3 \times 10^8$  CFU/ml. Histopathological investigation of infected organs was also performed. There was a focal area of bundles of skeletal musculature showing hyalinization. In addition, hyperplasia, congestion, and fusion were noticed in the gill lamellae. There was also congestion in the blood vessels in the ocular chamber. Severe congestion was also noticed in the central vein of liver associated with focal aggregation of the melanin pigmented cells in the parenchyma. Degenerative changes were noticed in the epithelial cells lining of kidney tubules. Plant extracts carvacrol and its biological precursor cymene was found to be effective in treating experimentally infected *Oreochromis niloticus* at concentration of 100 or 200 ppm.

**Key words:** Atypical *Aeromonas salmonicida*, *Oreochromis niloticus*, Pathogenicity, Intramuscular, Intraperitoneal, Carvacrol, Cymene.