



## The Comparison Study of In-vitro Antimicrobial Effects of AQUAFLORFENICOL 50 % Product of Iranian Company on Some Rainbow Trout Pathogens

Nekouiefard A.<sup>1\*</sup>; Khezri M.<sup>1</sup>; Seidgar M.<sup>1</sup>; Abbaspour Anbi A.<sup>1</sup>; Shiri S.<sup>1</sup>; Abdi K.<sup>2</sup>; Mehrabi M.<sup>3</sup>; Gangi S.<sup>1</sup>; Mostafazadeh B.<sup>1</sup>; Sadeghi B.<sup>4</sup>; Almasifar SH.<sup>4</sup>; Shahbazian N.<sup>2</sup>

1-National Artemia Research Center, Iranian Fisheries Sciences Research Institute, Agricultural Research, Education and Extension Organization (AREEO), Urmieh, Iran.

2-Iran Veterinary Organization, Tehran, Iran.

3-Iranian Fisheries Sciences Research Institute, Agricultural Research, Education and Extension Organization (AREEO), Tehran, Iran.

4-Tolide Darouhai Dami Iran Company, Tehran, Iran.

\* Corresponding author's email: a.nekouiefard@areeo.ac.ir

### Abstract:

Florfenicol is one of the antibiotics widely used in veterinary medicine, which is also extensively used in aquaculture industries. This research was carried out to evaluate the antibacterial effect of Iranian made Florfenicol 50% (*Tolide Darouhai Dami Iran Co.*) on some most common pathogens of rainbow trout (*Oncorhynchus mykiss*). This study was conducted at the Iranian Artemia Research Center in 2019. The in-vitro antimicrobial effect of Florfenicol 50% was performed by Minimum Inhibitory Concentration (MIC) and Minimum Bactericidal Concentration (MBC) on *Streptococcus iniae* and *Lactococcus garvieae*. The MIC and MBC of Florfenicol 50% against *Lactococcus garvieae* and *Streptococcus iniae* was 0.312 and 0.625 ppm, 1.25 and 2.5 ppm, respectively. Florfenicol 50% made by *Tolide Darouhai Dami Iran Co.* had a favorable antibacterial effect on *Streptococcus iniae* and *Lactococcus garvieae*, even comparable with that of positive controls of Enrofloxacin 10%, Oxytetracycline 20%, Doxycycline 50 %, Intertrim 500, Florfenicol 10% and Flumequine 20%. It is recommended to study the mechanisms of action, interaction with other antibiotics and health related properties of Florfenicol to use as replacement for undesirable antibiotics.

**Keywords:** Florfenicol, Antimicrobial activity, *Oncorhynchus mykiss*