

# Haematological parameters in Caspian trout (*Salmo trutta caspius*) infected by Viral Haemorrhagic Septicaemia Virus (VHSV)

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## Abstract

Differential susceptibilities to VHSV of two strains of Caspian trout (*Salmo trutta caspius*) (cultivated and wild parentages) were recently reported. We here describe the haematological changes in fish from the two strains following VHSV injection challenge. The infection was initially associated with clear reduction of various blood parameters in both groups but from day 8 post infection a significantly higher increase of these factors was recorded in wild compared to cultivated fish which may reflect the differential VHSV susceptibility of the strains.

## Introduction

VHSV outbreaks in rainbow trout farms in Iran occurred in 2005 and 2014 in different provinces of Iran (Ghorani et al., 2016) and the recent spread of this virus could therefore potentially pose a new threat to endemic species like Caspian brown trout (*Salmo trutta caspius* Kessler, 1877) which lives in water bodies connected to rainbow trout farms. *Salmo trutta caspius* is regarded as an endangered species and the Iranian Fisheries Organisation has established a conservation program including captive breeding and restocking (Zorriehzahra, 2012). We have previously (Karami et al., 2018)

demonstrated that wild and cultured strains of Caspian trout are susceptible to VHSV following experimental challenge. The aim of the present study was to elucidate if and how the susceptibility of the two strains would be reflected by blood parameters following VHSV injection.

## Materials and methods

### *Fish samples*

The samples included in the present study were from experiments reported earlier (Karami et al., 2018). They originated from Caspian trout juveniles reared at the Kalardasht Salmonids Reproduction Center that had been transferred

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