

INVESTIGATION AND CHARACTERIZATION OF THE GROWTH HORMONE TYPE 1 (GH1) GENE HOMOLOGUE IN THE *SALMO TRUTTA CASPIUS*

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Abstract. *Salmo trutta caspius* growth hormone genes (GH) homologue are used as models for studies in comparative variation breeding, transgenic and growth body weight. Hence variation genetic was studied between the *salmo trutta caspius* growth hormone gene1 (GH1) and *Salmo salar*. In this study, isolation and characterization of growth hormone of gene type 1 (GH1) in the *salmo trutta caspius*, recognizing full length DNA GH1 in strain *salmo trutta caspius* on the gel electrophoresis. First, DNA genomic extracted from blood samples of adult *salmo trutta caspius* and from places north of Iran was done. The method of DNA extraction (absorption on the fiber glass (kit) were used. One pair of primers was designed towards GH1 gene homologue. DNA template concentration, annealing temperature and extension time was monitored to optimize them. PCR products have been compared between strains on the gel electrophoresis. Four fragments from nucleotide of 1 to 2541 were sequenced. The PCR products were analyzed by BLASTn. Results are shown; there were high homology within strains, *salmo trutta caspius* and *salmo salar* 96% approximately. Moreover, our discussion are shown about sequencing homologue GH1 of *salmo trutta caspius* populations possible have been common ancestor with different species *salmo trutta*.

Key words: *Salmo salar*, *Salmo trutta caspius*, Growth hormone gene type 1, Sequencing, DNA

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