

## عنوان مقاله:

IGF-I gene expression in liver and white muscles confirming promotion effect of dietary NaCl on Growth indices of Giant sturgeon (*Huso huso*) juveniles

## محل انتشار:

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## خلاصه مقاله:

This study was conducted to evaluate effects of different levels of NaCl used in the diet of cultivated *Huso huso* juveniles based on gene expression of Insulin-like Growth Factor (IGF), IGF mRNA in the liver and muscle. Totally 480 specimen beluga juvenile by the average weight of  $173.8 \pm 0.49$  g stocked in 12 tanks and reared for 12 weeks. The NaCl added in 4 levels and with three replicates of 0 (control), 3, 6 and 9 percent to the basic diet. After 12 weeks total RNA extracted from the liver and muscle which were sampled from two replicates of treatments and evaluated by electrophoresis.  $\beta 2m$ -qPCR primer was used as gene reference. The size of the product obtained from primers and the specific degree of action of primers was confirmed using agarose gel (1.5%) and the sequencing of the genes. According to the results, significant changes in IGF mRNA expression observed in the treatments and control group ( $P < 0.05$ ). The data of IGF gene expressions showed that the highest levels observed in the control group and treatment 3% respectively. Moreover, in the tissue of white muscle, IGF mRNA gene expression showed highest gene expression in the control group (6.4) and lowest expression were in treatment 3% (0.7) and treatment 6% (0.8). Also, growth indices results including body weight, Specific Growth Rate (SGR), Body Weight Index (BWI), Hepatosomatic Index (HSI) and Average Daily Growth (ADG) significantly were increased in all treatments, with significant differences among treatments and the control group ( $P < 0.05$ ). The SGR in the control group increased from 1.41 to 1.58 in treatments 3% and 6% and the BWI increased from 68.88 in the control group to 98.28 in treatment 6%. HSI increased from 3.64 g in the control group to 4.37 g in treatment two. FCR showed a significant difference in the control group (1.27) and 1.14 in 3% and 9%, respectively. Statistical analysis of FCR, SGR and IGF mRNA gene expression showed better growth indices in fish fed by a diet containing NaCl.

## کلمات کلیدی:

Gene expression, *Huso huso*, IGF-I, NaCl, diet, growth

## لینک ثابت مقاله در پایگاه سیویلیکا:

