

## Abstract

*Haemonchus Contortus* economically is a very important parasite and may cause damage and increase the cost of husbandry, treatment and even death in high contamination. economical damages among animals caused by this parasite is very high all over the world. *Haemonchus contortus* is evolving and shoes high levels of genetic variation and there are many uncertainties in taxonomic classification of the species of this genus. Due to importance of fight against parasitic worms, using banzimidazole have more than two decades history and today farmers are using imidazoles and banzimidazole compound for treatment of parasitic infections in farm animals. The most common molecular mechanism that lead to resistance against banzimidazoles in *Haemonchus Contortus* is only one mutation at amino acid 200 (phenylalanine to tyrosine) from isotype1 betatubulin gene. Since genetic studies in addition to morphological studies contributed greatly to the understanding of the parasite Taxonomic Profile. The present study was designed which can results in achieving the information about the evolution of parasites, Prevalence of mutations, host safety , control and prevention. This study aimed to determine the molecular nature of betatubulin gene in *Haemonchus contortus* in Zabol city. For this purpose a total 10 adult *Haemonchus contortus* was separated from cattles abomasum, was washed in buffered saline and were stored in %70 alcohol until DNA extraction. The entire DNA genome was extracted by the columnar commercial kit according to it's instructions. After PCR was done, electrophoresis was preformed in %2 gel agarose. Obtained sequences were compared and evaluated with available sequences in GenBank from other parts of Iran and the world using

MEGA 6.1 and ClustalW softwares. Phylogenetic tree were drawn using MEGA 6.1 software and Neighbor-Joining method with Bootstrap 1000. most similarity was between *Haemonchus* that we studied and *Haemonchus plasei* in Australia. In addition, *Haemonchuses* studied in zabol were susceptible to benzimidazoles and no mutation were seen at codon 198 and 200.

Key words: *Haemonchus*, Benzimidazole, Zabol city, Betatubulin



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