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# Albendazole resistance evidence in *Teladorsagia circumcincta* in Iranian sheep by allele-specific PCR

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## Abstract

Gastrointestinal nematodes (GIN) have a considerable impact on the livestock husbandry and health conditions in Iran as well as worldwide. The infected animals with GIN mostly need chemical therapy which leads to the development of anthelmintic drug resistance. The main objective of the current study was to determine the frequency of  $\beta$ -tubulin isotype 1 gene polymorphism to albendazole (Alb) in *Teladorsagia circumcincta* isolated from sheep abomasum in Urmia city, Iran. A total number of 140 sheep abomasum were randomly collected and 57(40.7%) were infected with *T. circumcincta* (157 adult *T. circumcincta* per sheep). Alb resistance in *T. circumcincta* determined using Allele-Specific PCR (ASP) technique. Molecularly, the frequency of resistant alleles to Alb in examined *T. circumcincta* was 48.3%, i.e. 51.7% homozygous susceptible (SS), 6.9% homozygous resistant (rr) and 41.4% heterozygous susceptible (Sr). It was concluded that Alb-resistance alleles were increasingly widespread in examined *T. circumcincta*, therefore prevention and control program should be launched in the region.