SENSITIVITY OF TWO STRAINS OF *HAEMONCHUS CONTORTUS* TO ALBENDAZOLE

SENSIBILIDADE DE DUAS CEPAS DE HAEMONCHUS CONTORTUS FRENTE AO ALBENDAZOLE

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Gastrointestinal parasites cause high economic losses in small ruminant production and this problem has worsened because helminths have developed resistance to many of the commercial anthelmintics. In the state of São Paulo, studies have detected this problem in approximately 90% of the farms. *Haemonchus contortus* is the most prevalent and resistant helminth, and causes the greatest loss to small ruminant production. Albendazole (ABZ) is an anthelmintic which, although the related efficacy is below the expected values, is still widely used for the control of gastrointestinal parasites. The identification of the sensitivity and/or resistance profile of the strain for a specific commercial anthelmintic is an essential step for standardization of *in vitro* diagnosis tests. The objective of this work was to evaluate the sensitivity/resistance profile of two strains of *H. contortus* against ABZ at a concentration of 0.1 mg mL^{-1} in the *in vitro* egg hatch test. One of the two tested strains is resistant (previously validated as resistant to albendazole, ivermectin, levamisole, trichlorfon and closantel). This strain was compared with a sensitive strain (which requires validation). About 100 eggs of each strain were exposed to ABZ diluted in distilled water at pH 7. Each strain was tested with 6 replicates in a 48-well polystyrene plate and incubated for 24 hours at a temperature of 27°C. The hatchability was evaluated under an inverted microscope to count the number of hatched and non-hatched eggs. Data were evaluated by analysis of variance analysis to compare the efficacy of the strains. Data presented normality (Kolmogorov-Smirnov test) and homogeneity of variance (Levene test). The resistant strain was different from the susceptible strain ($P<0.01$). The mean efficacy of ABZ on the susceptible strain was 85.25 ± 4.75% and the mean efficacy on the resistant strain was 12.81 ± 7.48% at 0.1 mg mL^{-1}. These data indicate the resistence of one susceptible and one resistant strain, which is important to be considered as positive and negative standard controls for the development of commercial tests to detect anthelmintic resistance to ABZ.

Key-words: albendazole, egg hatch test, *Haemonchus contortus.*