

## ABSTRACT

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**Title:** On pharmacokinetic of single administration of albendazole in mouflon (*Ovis musimon*)

### Abstract:

This diploma thesis contributes to the knowledge of albendazole pharmacokinetics in mouflon (*Ovis gmelini musimon*) treated by a single administration of albendazole in a dose of 30,0 mg/kg of body weight. Two separate experiments were realised. The first one was carried out on 12 mouflon ewes divided into 4 groups. Groups of the animals were gradually culled at the time intervals of 4, 6, 8 and 10 hours after the albendazole administration. The samples of the blood (serum), bile from gallbladder and terminal bile ducts were withdrawn. The concentration of albendazole (ABZ) and its major metabolites albendazolsulphoxide (ABZSO) and albendazolsulphone (ABZSO<sub>2</sub>) were determined in samples of biological materials by HPLC method. To determine the ratio of ABZSO enantiomers, the HPLC method with chiral column was used. The second experiment carried on 2 animals (time interval 6 hours) extended and partially confirmed previous results.

The increase in blood concentrations of albendazole and its metabolites until the eighth hour after the administration is evident. In later time intervals decrease in concentrations was documented. The concentrations of ABZSO and ABZSO<sub>2</sub> between the bile from the gallbladder and the bile ducts differ minimally. The average maximum concentration of ABZSO in the bile is 3.6 µg/ml for gallbladder and 3.3 µg / ml for bile ducts. The ratio of enantiomers ABZSO (-) and ABZSO (+) is shifted significantly to ABZSO (+) in all the samples. The found ratio of enantiomers in individual time intervals is not constant.

**Key words :** albendazole, *Ovis musimon*, farmakokinetics, HPLC

