

## ABSTRACT

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Drugs are potentially dangerous contaminants of the environment. The entry of anthelmintics into the environment is mainly via excrement of treated animals. Anthelmintics can negatively affect the ecosystem by acting on non-target organisms such as plants and soil microorganisms. The accumulation of medicines in plants is also at risk. The consumption of these plants may promote the development of resistance in helminths. This thesis looked at the study of the influence and biotransformation of frequently used anthelmintics of albendazole (ABZ), ivermectin (IVM) and monepantel (MOP) in the forage plants of alfalfa seté (*Medicago sativa*) and the meadow clover (*Trifolium pratense*). Plants cultivated in *in vitro* conditions and plants grown in a greenhouse were used for evaluation. Phytotoxicity was monitored on seeds and whole plants by measuring the length of the roots, by determining the content of proline, light-collecting pigments and the total protein content. Mild phytotoxicity was observed after ivm administration, while other anthelmintics had no significant effect on most of the parameters determined. The identification of ABZ metabolites was carried out using high-performance liquid chromatography associated with tandem mass spectrometry (UHPL-MS/MS). The results show the ability to uptake and metabolise ABZ in both plants. Based on the identified metabolites, ABZ metabolic pathways schemes have been proposed. Most metabolites can be considered deactivated products, but some of them are unstable and can be transformed again into active substances that can continue to act in the ecosystem.