

## **ABSTRACT**

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Title of Thesis: Synthesis of cyanobenzamide derivatives with anthelmintic activity

The goal of this work was to prepare four of the most active known cyanobenzamides from the new promising anthelmintic group (aminoacetonitriles – AADs).

Synthesis of first three compounds was carried out by alkylation of the corresponding phenol with chloroacetone followed by the Strecker reaction of ketone and acylation of the amine with substituted benzoylchloride.

For the fourth derivative, alternative synthesis was established. THP-protected hydroxyacetone was used as a substrate for the Strecker reaction, which was followed by the acylation with substituted benzoylchloride. Finally aromatic nucleophilic substitution of activated fluorobenzene yielded the targeted compound.

All prepared derivatives were synthesized in good yields. Compounds are currently being tested at the Department of Biochemical Sciences, Faculty of Pharmacy in Hradec Králové to explore the relationship between drug metabolizing enzymes (DME) and drug resistance.