ABSTRACT

The dissertation thesis belongs to the conception of the research of potential antimycobacterial compounds. The aim of this work is synthesis of sulphide pyridine derivatives and the relationship between structure and antimycobacterial activity. Within the framework of this Thesis, the 112 substituted derivates of 4-(subst. fenylalkylsulfanyl)pyridine-2-carboxylic acid were synthesized. Antimycobacterial activity of prepared substances has been tested under *in vitro* conditions against *M. tuberculosis,* and non-tuberculous mycobacteria *M. avium* and *M. kansasii*. The series of 4-(subst. phenethylsulfanyl)pyridine-2-carbothioamide (MIC 1-32 μmol/L) represents the most active substances (MIC 1-32 μmol/L). These derivates don´t reach the activity used antituberculosis drugs against *M. tuberculosis*, but their activities against *M. avium* exceed that of isoniazid. The synthesis of new structures as potential antimycobacterial compounds forms the second part of Thesis. All synthesis is based on the use of bis-arylimidoyl chlorides of oxalic acid of as starting material. None of prepared new compounds don´t display an interesting antimycobacterial activity.