

## ABSTRACT

Buláková, A: Isolation of alkaloids of the species *Geissospermum vellosii* Allemão and study of their biological activity I. Diploma thesis, Charles University, Faculty of Pharmacy in Hradec Králové, Department of Pharmacognosy, Hradec Králové, 2020.

Key words: *Geissospermum vellosii*, bark, alkaloidal extracts, isolation of alkaloids, GC/MS analysis, biological activity, acetylcholinesterase, butyrylcholinesterase.

*Geissospermum vellosii* as a plant belongs to the Apocynaceae family, whose bark is characterized by the content of indole alkaloids, which can also act as acetylcholinesterase inhibitors.

The aim of this thesis was to process the pool of ethereal and chloroformic alkaloids from the plant *Geissospermum vellosii*. By means of column chromatography, the ethereal pool was processed into subfractions GV-1 to GV-16.

Taking advantage of preparational method TLC, the subfraction GV-11 was processed, of which one alkaloid-based substance was isolated. Its structure was determined based on GC-MS and NMR analysis and after comparing obtained data with the literature, the substance was identified as Normacusin B. The substance, we extracted, was of unstable nature and because of that, we could not research its biological activity further in relation to AChE and BuChE.

Due to the instable nature of said substance, it was not possible to determine, whether it can emanate potential inhibitory activity towards cholinesterases.