**ABSTRACT** Sekula, M.: Biological activity of plant metabolites XI.; Alkaloids of *Corydalis cava* (L.) Schweigg. & Körte (Fumariaceae) and their activity on acetylcholinesterase. Diploma thesis, Charles University in Prague, Faculty of Pharmacy in Hradec Králové, Department of Pharmaceutical Botany and Ecology, Hradec Králové 2009, 61 p. Within the screening of plants that contains alkaloids inhibiting the aktivity of the human erythtocytic acetylcholinesterase and human serum butyrylcholinesterase Turkey Corn (*Corydalis cava* (L.) Schweigg. & Körte, Fumariaceae) was studied. 11,3 kg of the dry roots served for the isolation of alkaloids. Extrakt „B-chloroform" wich contain mixture of terciary alkaloids bad diethylether-insoluble were obtained from the purified ethanolic extract. The task was to separate mixture of alkaloids from extrakt „B-chloroform". Using both column and thin layer chromatography sinoacutine as a base was isolated. The identity of the isolated alkaloid as determined by means of comparing its physico-chemical characteristics with the published data. The isolated sinoacutine inhibited the human erythrocytic acetylcholinesterase and human serum butyrylcholinesterase with $IC_{50}$ for AChE ($1{,}510 \times 10^{-3}$ M) and with $IC_{50}$ for BuChE ($1{,}806 \times 10^{-3}$ M). Comparing its biological aktivity with that of standard alkaloid inhibitors (galanthamine and eserine) the isolated substance is not very interesting regarding futher studies of natural products that could serve as lead compounds for the development of potencial drugs against the Alzheimer´s disease. *Keywords*: Alzheimer disease, alkaloids, *Corydalis cava*, acetylcholinesterase, biological activity.