

Abstract

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Within the frame of diploma thesis the screening of alkaloids from some taxons of Papaveraceae and Fumariaceae families for the inhibition of acetylcholinesterase (AChE) was performed. The method was elaborated for obtaining optimum extracts (alkaloid concentrates explicit type) from morphological parts of following plants: *Chelidonium majus* L. (herb, roots), *Eschscholtzia californica* Cham. (herb, whole plants resp.), *Corydalis solida* (L.) Sw. (herb) and *Papaver somniferum* L. (poppyhead).

After preparation of basic extract, and after its acidification and purification water extracts were prepared after pH adjustment (Na_2CO_3 , NaOH) by extraction with diethylether (L, pH ~2; A, pH ~9; B, pH ~12) and chloroform (iodides of quaternary bases (J, pH ~3; E, pH ~9). Individual extracts were analysed by the using of TLC in neutral and basic system on silica gel on content of alkaloids (Dragendorff reagent, Munier modification). Extracts with alkaloid content were further tested for inhibitory activity on AChE by the means of autobiographical method together with standards (physostigmine, galanthamin) using TLC (silica gel, neutral developing system). AChE originated from electric eel, for coloured response were used 1-naphthylacetate and Fast Blue B Salt; as the results of positive response were white zones on violet background.

In all monitored plant material samples was proven presence of inhibitors AChE, that exhibited different activity level. However, only taxons *Chelidonium majus* L. (herb, roots) and *Eschscholtzia californica* Cham.(whole plant) are prospective for further study (isolation of active alkaloids).