

Acetylcholinesterase and Butyrylcholinesterase inhibitory activities of *Berberis vulgaris*

D. Kolář

L. Wimmerová

R. Kádek

Abstract:

Berberis vulgaris is a famous medicinal plant used in folk medicine for a variety of pathological condition. Aim of the study was to determine cholinesterase inhibitory effects of crude extracts and fractions of *Berberis vulgaris*. Considerable inhibition of acetylcholinesterase was observed in majority cases. The hexane fraction was the most active fraction with the IC₅₀ being 68 ± 0.028 $\mu\text{g/ml}$. In case of butyrylcholinesterase, crude extract of the leaves found to be the most active sample with (64%) inhibition and its IC₅₀ value was 59 ± 0.058 $\mu\text{g/ml}$. In case of fractions, aqueous fraction of crude bark extract showed most potent inhibitory profile (IC₅₀: 59 ± 0.058 $\mu\text{g/ml}$). Results indicated promising potential of *B. vulgaris* as source of new compounds for management of Alzheimer's Disease.