

Abstract

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Extract of *Vinca minor* L. was separated to fractions in column chromatography. Flash chromatography, preparative TLC and crystallisation led to isolation of two alkaloids from fraction number two and number five. Alkaloids were identified by GC/MS as (+)-vincaminorine and vincorine. These alkaloids were tested for their inhibition activity towards cholinesterase (AChE and BuChE). Obtained activities IC_{50} were compared with standards (galanthamine, huperzine A).

The most interesting activity against galanthamine (AChE $1,710 \pm 0,065 \mu\text{M}$, BuChE $42,30 \pm 1,30 \mu\text{M}$) and huperzine A (AChE $0,033 \pm 0,001 \mu\text{M}$, BuChE $> 1000 \mu\text{M}$) showed vincorine (AChE $> 1000 \mu\text{M}$, BuChE $9,75 \pm 0,45 \mu\text{M}$). His activity toward BuChE is higher than the activity of both standards. Inhibition activities of (+)-vincaminorine (AChE $746,5 \pm 84,13 \mu\text{M}$, BuChE $684,32 \pm 70,66 \mu\text{M}$) are negligible.

Key words: Alzheimer's disease, cholinesterase, Apocynaceae, *Vinca minor* L., indole alkaloids