

Abstrakt

Charles University in Prague
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Title of Diploma Thesis: The effect of acetylcholinesterases reactivators on the cholinesterases and cholinoreceptors

This thesis is concerned with the effects of oximes on the muscarinic receptors. In the first half of the theoretical part there is a description of the autonomic nervous system, main receptors and action of acetylcholinesterase (AChE). The second part summarizes important nerve gases, organophosphate poisoning and its treatment and finally introduces oximes and their mechanisms of action.

The practical part shows the methodology of experiments on the atria tissues in the rat. Both *in vitro* and *in vivo* procedures demonstrated effect of oximes on the M2 receptors and their antimuscarinic properties. The *in vivo* studies were focused on the two contradictory effects – the inhibition of AChE and the inhibition of muscarinic receptors by the very same compound.