

ABSTRACT

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The evaluation of alkaloids using *in vivo* tests with *Artemia salina* I.

Alzheimer's disease is the most common cause of dementia and it is one of the lifestyle diseases. There is so far available only limited symptomatic treatment and the occurrence of the lifestyle diseases (and thus Alzheimer's disease) is increasing in recent decades. Therefore it is necessary to find new compounds which will be effective in the treatment of this disease.

Toxicological screening - which was our task - is the part of the research of each substance. For the evaluation of the acute toxicity appears as a suitable organism brine shrimp *Artemia salina*, which was used in the experiment for the purposes of this work. The experiment was conducted in a miniaturized environment.

There were tested three substances belonged to the isoquinoline alkaloids: californidine, papaverine and morphine.

As the most toxic was evaluated alkaloid californidine, alkaloid papaverine had less toxicity. Morphine appeared essentially as nontoxic with using the same methodology and similar concentrations as in the case of californidine and papaverine.