

ABSTRACT

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Title of diploma thesis: Alkaloids of *Zephyranthes citrina* (Amaryllidaceae): isolation, determination of structure, biological activity

Key words: Amaryllidaceae, alkaloids, *Zephyranthes citrina*, biological activity, isolation

From the selected alkaloidal fractions obtained from the bulbs of *Zephyranthes citrina*, six different alkaloids were isolated by chromatographic methods. They were identified using standard analytical methods (NMR, MS, HRMS, and optical rotation). The obtained compounds belong to the lycorine structural type (lycorine, galanthine, 6-oxonarcissidine, narcissidine) and haemanthamine structural type (maritidine, zephyranine E). The alkaloid 6-oxonarcissidine has not been described in the literature yet. The inhibitory activity against human AChE and BuChE was measured for the isolated alkaloids. Lycorine, galanthine, narcissidine, and maratidine have already been measured in many studies before; therefore, the attention was focused on the two less-known alkaloids: zephyranine E and 6-oxonarcissidine. However, the resulting IC₅₀ values of both alkaloids against human AChE and BuChE were above 100 μM, which indicates their insignificant inhibitory potential.

