ABSTRACT BOOK

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Pharmacognostic study of *Acanthus mollis l* leaves – a new species for Ukraine

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Introduction. Biological pollution of the environment due to invasive species in natural flora communities has been recognized as one of the most pressing environmental problems, not only in Ukraine but also worldwide. One of these "unfamiliar plants" is A. mollis, which, according to the Global Biodiversity Information Facility, appeared in Ukraine in 2019 [2]. One way to confront and possibly control an unfamiliar species is to use it in medicine and pharmacy.
Objective. To investigate the morphological and anatomical features of A. mollis leaves in our region and to identify the main groups of biologically active substances.
Methods. Fresh and dry leaves of A. mollis were studied using systematic, comparative, and descriptive methods. The quantitative content of polysaccharides was determined according to the monograph SPhU 2.1 "Plantaginis majoris foliumN" [1].
Results. The leaves of A. mollis are pubescent, long-petiolate, pinnately divided, segmented into spinous-toothed lobes, which, starting from the fourth level, have alternate displacement in their attachment to the longitudinal petiole. The venation is pinnately reticulate. The 8-celled essential oil glands are concentrated mainly along the veins. The rest of the trichomes are simple, multicellular, warty 2-3 or 5-6 celled, located only along the main veins of the leaf and its edge. The epidermis on both sides is formed by parenchymal convoluted cells. The leaf is dorsoventral, hypostomate. The stomata apparatus is of diacytic type. Stomata index is 21.5±4.
The content of polysaccharides in the studied sample was 15.8±0.56%.
Conclusions. It was established that the main morphological and anatomical features of A. mollis are leaf shape, venation, and pubescence; the stomata are diacytic; idioblasts with essential oil; 8-cell glandular and 5-6-cell simple trichomes. The polysaccharide content in the leaves of A. mollis is 15.8±0.56%, which allows it to be recommended as an additional source of raw materials containing polysaccharides.

References:
1. Derzhavna Farmakopeia Ukrainy/ DP «Ukrainskyi naukovyi farmakopeinyi tsentr yakosti likarskykh zasobiv». 2-he vyd. // Kharkiv – 2015. – T. 1. – 167 2.https://www.gbif.org/species/5415455 (accessed 15.03.2023)