

## The prospects for the use of raw materials of domestic lichen species as medicinal

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Introduction. Nowadays, the search for sources of biologically active substances in order to create new herbal medicines remains a topical issue in the pharmaceutical industry. In this aspect, a comprehensive study of lichens as a group of organisms, which are relatively insufficiently researched, is considered promising. As a result of symbiotic interaction of lichen components - fungus and algae, specific lichen substances are formed.

Research objective. To analyze the range of lichen species, which are common throughout Ukraine, as promising sources of medicinal raw materials.

Materials and methods. Data of scientific publications on the use of substances, isolated from lichens, in medicine and pharmacy, determinants of lichen flora of Ukraine, own resource researches.

Results and discussion. In general, more than 1670 lichen taxa are known in Ukraine. The Red Book of Ukraine lists 52 species of these organisms, most of which have the status of rare and vulnerable [2]. *Lobaria pulmonaria*, which has the appearance of the structure of human lungs, has been used in the treatment of lung diseases. In folk medicine of the East, this lichen is used for bleeding and dermatitis cure. The decoction has anti-inflammatory and anti-ulcer effect, alcohol extract has a protective effect on the gastrointestinal tract of rats [1]. *Lobaria pulmonaria* is most often found on the trunks of deciduous trees in the forests of Zakarpattia, Carpathians, Prykarpattia, Western and Right-Bank Polissya, Western and Right-Bank Forest-Steppe. In eastern Ukraine the species disappeared due to air pollution [3]. In the second half of the 20th century wide antimicrobial action spectrum of evernic and usnic acids, which are obtained mainly from the lichen *Evernia prunastri*, was shown [1]. Medications based on it are used in the topical treatment of skin diseases. *Evernia prunastri* grows on the bark of deciduous trees, especially birch and oak. It occurs in Zakarpattia, Lviv, Volyn and Rivne regions, the Right-Bank and Left-Bank Polissya, the Forest-Steppe zone of Kharkiv region. It is disappearing from the territory of the Steppe zone due to atmospheric pollution [2]. Physodic, caperic and usnic acids are used for the treatment of tuberculosis. Raw material of their producing is thalli of lichens *Hypogymnia physodes* and *Parmelia caperata*, which are common on the plains and in the mountains on the bark of trunks and branches of deciduous and coniferous trees, rarely on treated wood and soil. *Hypogymnia physodes* is widespread throughout Ukraine, except the Steppe zone. *Parmelia caperata* is common for the Right-Bank and Left-Bank Polissya, Zakarpattia, Lviv, Volyn, Rivne, Kyiv, Poltava, Chernihiv regions. In the Kharkiv region it is found in Chuhuiv and Zmiiv districts [3].

Conclusions. Thus, the taxonomic diversity of domestic lichens and the possibility of their harvesting, the peculiarities of their chemical composition and wide range of pharmacological activity of the substances, isolated from them, confirm the prospects of this area of pharmaceutical research.

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