

JUSTIFICATION OF THE LANGERMANIA GIGANTEA CHOICE AS RAW MATERIALS FOR OINTMENTS PRODUCTION

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Natural biologically active substances are essential for modern medicine, according to a number of advantages over synthetic. Typically, they have mild effect and low toxicity.

In recent years, along with plants scientists of many countries have paid attention to the mushrooms. They attract the attention as a unique and interesting organisms and as one of the gifts of nature used by humanity as food, medicines, and sometimes raw material for production of narcotic drugs.

The composition of fungi include proteins, carbohydrates, lipids, minerals (potassium, calcium, iron, copper, boron, cobalt, aluminum, phosphorus, fluorine, manganese and titanium) and vitamins (especially B group (B1, B2, B3, B5, B9), and to a lesser extent vitamin C, provitamin A and D. The medical use of fungi is based on the vast experience of traditional medicine. Fungotherapy – treatment of various human diseases, based on the using fungi as medicines, and complex preparations obtained from mushrooms. Methods of processing of mushrooms for Fung drugs are not focused on the release of chemically pure active substance but on usage of active substances complex in most simple and close to natural forms (decoction, tincture, extract, and others).

Our attention was attracted by the fungus *Langermania gigantea* (giant puffball *Calvatia gigantea*,). The pulp of fresh mushroom contains antibiotic kalvacin and more than 5% proteins. On the basis of *Langermania gigantea* already received antibiotic kalvacin and kalvacinic acid which inhibits the grown of bacteria and fungi and also has antitumor activity. Obtained by chemical synthesis derivatives of kalvacinic acid also have antibiotic activity. In folk medicine and homeopathy, the giant puffball is used as a hemostatic and disinfectant. *Langermania gigantea* contains ergosterol (provitamin D₂), kalvacin, kalvacinic acid eliminating many pathogenic bacteria in the human body. Spores can be safely apply to the bleeding wounds surface and successfully applied to heal festering wounds and ulcers. White core of giant puffball was used as patch in the field conditions. Medicines of the spores contribute to the removal of radionuclides, heavy metals, toxic fluorine and chlorine compounds, helminthiases toxins, hepatitis, dysbioses, acute kidney inflammation.

All of the above leads to the conclusion that the *Langermania gigantea* is a precious natural raw material for medicine producing. It is necessary to solve many problems before its introduction to medical practice. It's necessary to define the main groups of biologically active substances for the raw materials and drugs standardization. It is necessary to evaluate by the screening method the most valuable aspects of the pharmacological action. Decision of these issues will allow giving recommendations of using *Langermania gigantea* as active compound for medicines producing. Therefore, the study of the chemical composition and standardization of raw materials of *Langermania gigantea* is an urgent task of pharmaceutical science and practice.