THE CREATION OF BIOPREPARATION BASED ON BIOCHEMICAL COMPONENTS OF DIFFERENT BASIDIOMYCETES SPECIES AND HIGHER PLANTS.

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The question of the formation processes of biological products that were based on biochemical fractions from Basidiomycetes fungi and higher plants. Latest served carriers selected components used for industrial purposes. Done multifaceted experiments, which involve 15 species of fungi and plant material different families. Before using this material screening conducted its analysis on contamination with pathogens of different nature.

Mushrooms, plants, bacteria, viruses, biochemical compounds performance.

Recently, some companies and research centers developed many biological drugs that are used to create productive and high quality crop and valuable drugs [9,16-19].

It should be noted that these challenges are particularly relevant, because monoculture in the fields, growing plants for new biotechnology often give rise to the emergence of aggressive pests and pathogens that unexpectedly negative impact on product quality crops.

However, keeping a commercial basis, researchers have increasingly focused on the development of biological products based on components of living systems that must interact harmoniously with environmental conditions agrocenoses chain and transformed environment in biotechnological processes.

It is known biologically active substances belonging to different classes of compounds as polymer and heterocyclic and nanomernoyi structure. These components are allocated peptides that are polymeric compounds and mainly formed from a large number of amino acids linked by amide bonds. Often these compounds play an important key role in the regulation of physiological and biochemical processes in the body both animal and vegetable origin and are almost always available in different types of tissues. This is also important steroid compound structure.

Out of monomer components with different initial structure of molecules of interest are free amino acids, which themselves can directly influence the various processes in animals and plants, and are able to be the basis for the biosynthesis of certain hormones and neurotransmitters. It is in the above is in their experiments, we

first evaluated the overall compounds of plant origin, mushrooms and integrated source of the drug. Thus we have chosen different kinds of Basidiomycetes, which are producers of a wide range of substances metabolites [2-4,8], phytohormones, inhibitors, antibiotics.

In addition, for example, the cultural mushroom edible basidiomycetes higher protein contains essential amino acids, which allows to obtain food biomass under the conditions of the process [5].

It should be noted that most of the work with the use of mushrooms in various fields unfortunately do not pass the initial screening for contamination and destruction of pathogens of different nature. However, this applies to the plant material used in the relevant processes in growing mushrooms and joint biochemical fractions from fruiting bodies and plants. This is when the mycelium of fungi and stand by our research fifteen pathogens of various taxonomic groups [2]. This situation causes significant negative impacts on the quality of products for various applications. It should be emphasized that drugs based on biochemical components of mushrooms lose their ability therapeutic activity.

Thus, the raw material of various species of fungi, plants should always be selected with quality biological objects for later use. Otherwise, researchers and manufacturers will have to deal in the process of structures microscopic fungi, viruses and bacteria. For example, some species of fungi in the defeat of psevdomonosamy (bacteria) are active and bacteriophages such structures as piroverdin providing certain properties of bacterial cells, altering their function [2].

The purpose of research - the creation of biological products based on biochemical components basidiomycetes and plants.

Materials and methods research. Selection of fungi was carried out under the conditions of the environment and processes for further analysis on pathogen contamination and receiving biochemical fractions of healthy fruit bodies [2,3]. To determine this kind of basidiomycetes evaluated habit of fruiting bodies, defeat viruses, bacteria and microscopic fungi. The technological process involved: Fluorescent and transmissive electron microscopy, ELISA, Uhterloni method, determination of microorganisms in the conditions of culture medium, electrophoretic analysis of

proteins and diagnosis of pathogens from the first time we have developed rapid method, which proved productive for this purpose [2].

It uses 15 types of fungi that were selected for further studies. Thus, the fraction of mushrooms received and evaluated by three positions: mushroom homogenate in phosphate buffer (pH 7.2, 1/15 m); fraktsiyuvannya at 8-10 thousand. / min, 15 min at low speed centrifugation (using supernatant); dyferentsionalnoho centrifugation (high 25-30 thousand. / min 35 min, the use of post-treatment sludge) separating the supernatant through a gel filtration.

We also used method for fractions of mushrooms, which was used in the allocation hlikozydaz intracellular microorganisms (modified L.V.Varbanets and N.V.Borzovoyi) [6]. The method consists in the fact that biomass suspended in 0.01 M kaliyfosfatnomu buffer (pH 7.2) followed by treatment with a suspension of ultrasound (22 kHz at 0.4 A) with multiple replications. Homogenate after its receipt of such centrifuged 30-35 min at 10,000 rev / min, the supernatant was then assayed for activity and subjected to further refining (gel filtration).

As holders of biologics used biochemical composition of plant compounds with family Asteraceae, rannykovyh, birch, zhymolestovyh, konoplevyh.

Depending on the purpose of the final preparation formed in various combinations [10, 11].

As a model system for assessing the growth and development of plants under different variants of the drug was determined on sunflower seedlings, which were found to sensitively react to various changes in the compositions of the drug. The research results were given the opportunity to select homogenates types of fungi that stimulate the growth and development of seedlings of sunflower (sort of Zaporozhye). These criteria were laid the basis for the selection of initial homogenate stimulating certain species of fungi with subsequent refining and biochemical analysis.

This technological approach given the opportunity to choose the faction of the rare species of fungi that are adapted to their properties on the basis of the drug for use in industrial conditions in the respective crops.

Today, on this basis, we have developed 4 different biological product (Bioekofunhe - 1). Changing the biochemical components of the drug and their carriers

were given the opportunity to solve problems using for different purposes comprehensive action: antypatohennoho impact on application conditions in vitro and greenhouse, seed processing plants and vehetatuyuchyh agrocenoses. It should be noted that the resulting complex preparation can prepack in liquid and lyophilized condition. According to different requirements biorechovyn main composition may be supplemented with natural minerals (drug "boa", "Bioekofunhe - 1").

To determine the nature of the components of the peptide adopted the following methods: biochemical photometry [1], the definition of physiologically active peptides [15]. In the studied samples of drugs lipid substances [12], including steroid, extracted and separated on the basis of thin-layer chromatography [13]. The overall level of amino acids in the samples was assessed by their characteristic ninhydrin - positive reaction to photoelectric (CPK-2) [7].

The problems of technological processes of forming biochemical preparation, which based on biochemical fractions from Basidiomycetes mushrooms and plant sare considered. The last one (plants) were carriers of selected components, which were applied for manufacture purposes. During making multifaceted experiments the 15 types of mushrooms and plant material of different families were involved. Screening analysis of contamination it with pathogens of different nature were conducted before using this material.

Mushrooms, plants, bacteria, viruses, biochemical compounds, productivity.

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