

## PROSPECTS FOR USING *PLEUROTUS OSTREATUS* EXTRACT IN TABLET FORM FOR PREVENTION OF ATHEROSCLEROSIS

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Our present is full of challenges that lead to constant stress, chronically non-communicable diseases, in particular pathology of the cardiovascular system, which is gaining global scale. One of them is atherosclerosis, which is a chronic disease of the arteries, which is characterized by the formation of atherosclerotic plaques on the inner membrane of the vessels (intima). These plaques consist of lipids, cholesterol, calcium, connective tissue cells and inflammation products. As a result, the vessel wall thickens, the vascular lumen narrows, which reduces the blood supply to the organs and tissues, which can lead to myocardial or stroke infarction.

The etiology of the disease is multifactorial, including lipid disorders, hypertension, smoking, diabetes and unhealthy lifestyle.

One of the promising biotechnological substances is the fungus *Pleurotus ostreatus*. They are a source of bioactive compounds: natural antioxidants (ascorbic acid, tocopherols, phenolic compounds),  $\beta$ -glucanas, polysaccharides, amino acids, vitamins of group B, D2, as well as minerals (selenium, potassium, zinc). Of great interest are  $\beta$ -glucan as they exhibit properties that reduce the level of lipids in the blood, regulate immune activity and affect carbohydrate metabolism.

At the same time, antioxidant compounds are capable of inhibiting the processes of fat peroxidation, which play a crucial role in the emergence and progression of atherosclerotic changes in the vessels. Modern scientific studies show that the systematic use of fungi in nutrition causes a decrease in total cholesterol, low-density lipoproteins and triglycerides, while increasing the lipid spectrum. *Pleurotus ostreatus* is also valuable to influence immune regulation and reduce the severity of systemic inflammation, which is a key pathogenesis of atherosclerosis.

The purpose of the study is to substantiate and develop the composition of the tablet form based on a common mushroom with a hypolipidemic effect for auxiliary therapy. Deep cultivation was used to grow bite. The AFI is the mycelium of *Pleurotus ostreatus* and excipients. With the help of an electron microscope, the form of powder particles was determined, they were anisodmetric. What helped to find the right components for a quality dosage form.

Therefore, the resulting preventative agent provides the optimal bioavailability of the active components of the fungus and promotes their gradual release, which increases the effectiveness of preventive action.