ANNOTATION

of report on Research Practice of a six-year student, group BT-51m

specialty 8.05140101 - Industrial Biotechnology

Kuzminskaya Irina Igorivna

on the topic: "Obtaining ivermectin strains of *Streptomyces avermitilis* for application in medicines"

In today's market medicines of veterinary appointments take leading position in anti-drugs based on the avermectin and milbemitsin. All of them cover a wide spectrum of activity and high efficiency that makes the choice of drug difficult.

Ivermectin has a strong insects-acaricidal effect on larvae and adults hamazovy and ixodid ticks, flies, lice, fleas, and nematodes. The target ivermectin are the glutamate-sensitive chloride channels and receptors γ-aminobutyric acid. Therefore, selection of domestic producers avermectin, studying ways of increasing its performance, the study of biological activity of synthesized complex avermektyn it are the relevant.

The aim of this work was the selection of *Streptomyces avermitilis* UCM Ac-2161 and studying conditions for its cultivation to increase the activity of avermectin synthesis, research impact avermektyn complex to use for drugs.

— determined that for high-performance strain of *S. avermitilis* an efficient multi-selection, the selection options in the study of spontaneous variability strain mutagenesis by irradiation with ultraviolet light treatment and N-methyl-N'-nitro-N-nitrosoguanidine;

— shows that the maximum avermectin producing strain of *S. avermitilis* UCM Ac-2177 is at cultivation in a nutrient medium in the presence of 7% glucose; synthesis increased by 16% in the presence of 0.5% Na acetate and 26% in the presence of plant growth regulators - Ivin in the amount of 100 sq / ml;

— shows a relationship between the activity and avermectin synthesized content in biomass producers triglycerides, phospholipids, and sterols;

— Fatty acid composition in *S. avermitilis* UCM Ac-2177 first discovered fatty acids with the number of carbon atoms from C4 to C10;

— established that ivermectin is a group of avermectin produced by microorganisms *S. Avermitilis*, which can be used with imidazole derivatives for the preparation of a medicament.

Using a strain of *S. avermitilis* UCM Ac-2177 which produces avermektynovyy complex that has stability and a positive impact on overcoming Psoroptes cuniculi.