

**"TRAINING OF HIGHLY QUALIFIED VETERINARY  
PHARMACISTS IN THE FIELD OF VETERINARY MEDICINE"**

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**Abstract:**

In this state, the training of highly qualified personnel in the field of veterinary pharmacy is studied. Uchityvaya situatsiyu, vozniyushchuyu and proizvodstve veterinary medicine, meeting all national and international standards.

**Keywords:** Pharmaceutical chemistry, pharmaceutical technology, tablet press, homogenizer, precision scales, magnetic stirrers and chromatograph, circulation thermostat.

The specialty "Veterinary Pharmacy" was opened at the university in 2021-2022, and the first graduation of pharmacists took place in 2022. The need to open it is due to the weak industrial pharmaceutical base for the production of animal protection products from diseases. Well-known events in the late 90s led to the fact that the Republic of Uzbekistan found itself without veterinary drugs. Only 10% of the need for medicines for the needs of veterinary medicine was produced by UZBIOKOMBINAT LLC of the Uzbek-British-Russian Joint Venture, which was created on the basis of the previously operating Samarkand Biofactory, was founded in 1964 and was engaged in the production of biological preparations for veterinary medicine.

After the privatization of the biofactory, the Uzbek-British-Russian Joint Venture was established to produce modern pharmaceutical and

immunobiological preparations that meet all national and international standards. Today, our company occupies a special place in the territory of the Republic of Uzbekistan and Central Asia, as there are no other companies with the same potential and such a comprehensive infrastructure. Enormous funds have been invested in the reconstruction of this biofactory, the capacities of other pharmaceutical enterprises have been expanded, and 40 private companies are engaged in the production of veterinary drugs. At present, strong business and scientific ties have been established with research institutions of the Republic of Uzbekistan (UzVITI, ANRUz SamSAN, etc.) and with the Belarusian Institute of Experimental Veterinary Medicine named after. S.N. Vyshel'sky (Minsk). The measures taken made it possible to increase the production of veterinary drugs up to 70% of the demand. The remaining funds will be purchased from abroad, as they are used in large volumes. Currently, the animal husbandry of the Republic of Uzbekistan consumes 500 types of medicines for the protection of animals. The main load at the first stages of the development of the veterinary pharmaceutical industry fell on the Samarkand State University of Veterinary Medicine, Biotechnology and Animal Husbandry (chemotherapeutic agents and some bacterial vaccines and sera) and on the Belarusian Research Institute of Experimental Veterinary Medicine (viral and bacterial vaccines, sera and chemotherapeutic agents). 20 years of experience in these areas has shown the presence of a serious problem associated with the lack of highly qualified personnel capable of actively developing new drugs and their production technologies. General practitioners of veterinary medicine graduating from our university had practically no special knowledge in pharmaceuticals. Therefore, the task of training special personnel arose. It should also be noted that in the Republic of Uzbekistan there are about 3,000 veterinary pharmacies with various forms of ownership. Taken on a course for large-scale production of livestock products, there are 5,000 poultry farms. This year, the reconstruction of over 7,000 dairy farms and complexes will be completed, each of these enterprises has pharmacies that require veterinary specialists with special training.

When organizing the educational process, a number of problems arose that had to be solved in the process of training specialists.

Non-core qualifications of most teachers. Since a new specialty has been opened at the University of Veterinary Medicine, new disciplines are taught mainly by specialists with veterinary education. In order to ensure better training of pharmacists (pharmacists) of veterinary medicine, it is necessary to involve more teachers of the pharmaceutical departments of medical universities, specialists from pharmaceutical enterprises and to actively retrain their own teachers. The advanced training of teachers of specialized disciplines must be carried out on the basis of pharmaceutical institutions and enterprises of the Republic of Uzbekistan.

Insufficient methodological support of the educational process. For a number of major disciplines, teachers prepared textbooks, educational and teaching aids, but not in the required volume. This also applies to educational and work practice programs.

Insufficient material base. Practical classes in a number of specialized disciplines (pharmaceutical chemistry, machines and devices of the pharmaceutical industry, pharmaceutical technology) are conducted using slides, diagrams and videos, since the departments do not have special equipment for practicing practical skills in the specialty. To study the discipline "Pharmacological Chemistry", pharmaceutical substances, magnetic stirrers and a chromatograph are required. Precision scales, a tablet press, a homogenizer, a rotary evaporator, an ultrasonic cleaning bath, a circulation thermostat and other equipment are required to conduct laboratory and practical classes in the discipline "Pharmaceutical Technology".

Imperfect curricula and programs. Compared to the training of pharmacists at medical universities, we have allocated a fairly large amount of hours for the study of veterinarians. scientific disciplines to the detriment of pharmacological and chemical disciplines. It should be noted that this is partially corrected in the new curriculum, however, in order to improve the training of pharmacists in veterinary medicine, more attention should be paid to specialized disciplines, without knowledge of which

it is simply impossible to obtain highly qualified specialists in this area. It is necessary to involve specialists in the development of curricula who know in detail the process of training pharmacists.

It is better to study the discipline "genetics and pharmacogenetics" after completing the course of the discipline "pharmacology". Propaedeutic practice and pharmacognosy must be completed after studying the relevant disciplines. Difficulties with distribution. Currently, most of the jobs of specialists at veterinary preparations factories, pharmaceutical enterprises of various forms of ownership, veterinary pharmacies, laboratories conducting pharmacanalysis are occupied by veterinary medicine doctors. In connection with the training of specialized specialists for these enterprises and organizations in the republic, it is necessary to introduce appropriate rates for them, indicating their specialty and qualifications. This will solve the problems with distribution and make it possible to start training in specializations over time. At the initial stage, the training of generalists in the specialty "Veterinary Pharmacy" is fully justified. However, as the need for specialists of a narrower profile arises, it will become necessary to start training pharmacists of veterinary medicine with 28 specializations: "Pharmacy", "technology for the production of veterinary drugs", etc.

In general, it should be noted that work in all these areas is carried out at the university and more than 5 years of experience in training pharmacists in veterinary medicine suggests that every year the quality of the educational process becomes more perfect.

Conclusion. Veterinary pharmaceuticals plays an important role in the economy of the state and in ensuring its food security. The arsenal of animal health protection must be constantly replenished due to the addition of pathogens to pharmaceuticals, as well as the emergence of new pathologies. Specially trained workers should play an important role in the development of the pharmaceutical industry. First of all, veterinary pharmacists

should actively participate in the development and production of veterinary drugs. Special knowledge is strongly required, especially in the field of chemistry. For high-quality training of pharmacists (pharmacists) requires the creation of a good material base, highly qualified teachers.

It is necessary to improve the legislative framework in order to expand the specialization of pharmacists in veterinary medicine so that employees with narrow deep professional knowledge are in the workplace.

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