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Modern Methods of Manufacturing Phyto-Tissue Preparations for Veterinary Medicine

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Annotation: In order to manufacture phyto-tissue preparations for veterinary medicine, the method of vacuum-cryogenic crushing of medicinal plants, animal and human tissues at a temperature of -196 C0 was used for the first time.

In the treatment of gynecological diseases of humans and animals with domestic phyto-tissue preparations, the efficiency of recovery is 75-80%, and dermatoses - 80-85%. The developed environmentally friendly phyto-tissue preparations have shown higher efficiency in the treatment of sick animals compared to synthetic, chemical preparations and their production is economically much more profitable, and domestic raw materials are also used.

Keywords: phyto-tissue, drugs, plant resources, ointment, pastes, stimulants, liniments, disinfectants, infertility, testes (milt), umbilical cord.

Relevance. The soil and climatic conditions of the Republics of Central Asia gave rise to the diversity and originality of the local flora (Kh. Kholmatov et al. 1984). A huge number (about 1700 species I.A. Akopov, 1986) of medicinal plants of Central Asia grows in the Republic of Uzbekistan.

A long-term analysis of WHO data on dermatological problems shows that the underestimation, in our opinion, of herbal medicine and the limited use of herbal medicines in dermatological practice, to some extent, is the cause of the prevalence of skin diseases observed almost all over the world. This is especially true for the increase in the incidence of dermatoses of complex etiology (psoriasis, eczema, vitiligo, trichophytosis, neurodermatitis, etc.).

According to WHO (2022), the incidence of dermatoses has increased, in the world up to 7%, and in Uzbekistan - up to 10-12%. According to the studies of M.A. Paltsev, N.N. Patenko (2012), only psoriasis affects up to 5%, urticaria - up to 20%, alopecia - up to 10%, infertility of cattle (cattle) occurs in 30-40%, barrenness - 10-20% (B. Eshburiev, 2015).

The main direction of our research is the orientation in the treatment of dermatosis and gynecological diseases towards the use of herbal medicine, and the development of the latest unique technologies for vacuum-cryogenic crushing, formulations, production and use of domestic medicinal products from an environmentally friendly natural product - the flora and fauna of Uzbekistan.

Scientific research and practical application of herbal medicine in dermatology is not enough due to a clear underestimation of the healing potential of herbal remedies. This convincing argument, in our opinion, largely predetermines the current neglect of the practice of herbal medicine. This attitude of domestic medicine to phytotherapy cannot be explained in another way, because in recent years, priority in the treatment of many diseases has almost always been given to methods of therapy using inorganic and synthetic agents, which are quite effective, but with a pronounced tendency to side

effects and in most cases accompanied by postclinical relapses. The liability of inorganic and synthetic medicines should also include their inaccessibility due to high cost.

Despite a number of positive medicinal qualities, phytopreparations, in our opinion, are undeservedly relegated to non-traditional medicine, known as traditional medicine.

On the importance of medicinal plants, V. Stanifort (1974) wrote: "Despite significant progress in science and technology, humanity is not less, but more dependent on plants as natural resources." The idea of developing the creation of environmentally friendly plant-based herbal medicines stems from centuries of experience in the use of medicines made from medicinal local plants and tissues of animals and humans. Avicenna and Abu Rayhon Beruni widely used various herbal remedies, decoctions, infusions, ointments, liniments, extracts, etc. Our scientific and practical research in the field of medicine and veterinary medicine is devoted to the creation of highly effective herbal remedies for the treatment of skin diseases using folk methods. To some extent, this is a continuation of the unfading heritage of oriental medicine.

Therefore, one of the stages of our scientific research is the creation of currently relevant phyto-tissue preparations for dermatological practice and the restoration, at least partially, of the former glory of Oriental medicine by methods of recreating original formulations of medicinal products based on domestic medicinal plants. Based on this, we have set ourselves the following goals and objectives arising from our proposed program of research and practical work.

Research methodology. In recent years, we have been studying the testes of animals, the umbilical cord and amniotic fluid of humans and animals, the flora of Central Asia in order to manufacture complex phyto-tissue preparations from them for use in medicine and veterinary medicine. For this, more than 100 representatives of medicinal plants of Central Asia were studied by atomic absorption and vacuum cryogenic methods, in order to fully preserve the biologically active substances of medicinal plants and tissues at a temperature of -196 C^0. BUF-15, BUF-30 were also used. For the manufacture of phytoestrogens, the Filatov method was used in the modification of Izbasarov, 2015. With the help of the Saturn-1, Saturn-2 apparatus, 37 biologically active components of macro- and microelements in medicinal plants were identified. Extracts from medicinal plants were isolated using the Saxlet apparatus. General spectral analyzes and laboratory studies were carried out in the clinical laboratories of the Samara State Medical University, the Samara State University and the vivarium of the SamSUVMLB.

Research objectives

1. Selection of medicinal plants of local flora and fauna and determination of their medicinal properties based on scientifically sound methods and practical tests.
2. Determination of macro- and microelement indicators, and BAC (biologically active components) for the manufacture of new phytopreparations from them by the vacuum-cryogenic method, for the treatment of dermatosis and gynecological diseases, as well as autovaccines to accelerate their duration.
3. For the first time, the nutriciology of drugs was studied.
4. The study of indicators of biologically active components of the testes and placenta of animals.
5. Development of technology for the creation of domestic phyto-tissue preparations for use in veterinary medicine and formulation.
6. Conducting preclinical trials of our herbal medicines on animals and patients.

Research results. For 50 years, more than 300 representatives of the flora of Uzbekistan have been studied to identify biologically active components, i.e. More than 30 macro-microelements were isolated using spectral analysis of the Saturn-1 and Saturn-2 spectrophotometers to create domestic phyto-tissue preparations using the vacuum cryogenic method.

For the treatment of dermatoses of complex etiology (psoriasis, eczema and vitiligo), herbal preparations in the form of ointments, disinfectants and liniments have been developed for the first time. The developed phyto-tissue preparations are patented in the Republic of Uzbekistan and the Russian Federation and received the name "Izbosarov's Ointment" for the treatment of psoriasis, as well as "Exemin Ointment" for the treatment of eczema. These herbal preparations were tested in clinics in Moscow, Samarkand, Bishkek and Chimkent in groups of 85 patients with psoriasis and 85 patients with eczema. In parallel, on another group of patients with psoriasis, traditional ointments Lorendent C, Diprosalik and Vishnevsky ointment were used. The data of clinical trials showed the following: the percentage of recovery from the developed drugs was, with psoriasis - 80-85%; within 35-40 days, with eczema - 85-90% in 15-20 days. And for comparison, we present the results of treatment with traditional drugs, which are 45-50% and 37-40%, respectively.

It should be noted that during 4-5 years of monitoring the condition of 12,250 patients among those who used phyto-tissue preparations for treatment, no relapses were observed, and among those treated with traditional preparations, relapses were observed in 10-20% of patients. Observations of patients showed that the recovery period for patients with psoriasis was reduced from 28 to 20 days, eczema from 20 to 10 days, and vitiligo - by 30 days.

The conducted tests have shown that the used phyto-tissue preparations are highly effective, environmentally friendly therapeutic agents, meet the technical requirements for pharmacological agents and preparations, and do not show side effects.

Thus, we can say with confidence that the creation by us of new highly effective phyto-tissue preparations for the treatment of such intractable ailments as psoriasis, eczema, vitiligo are a direct continuation of the traditions of the luminaries of Eastern medicine, in particular the legacy of the great Avicenna.

In addition, our phyto-tissue preparations, stimulin and disinfectants A and B have shown their positive effect in gynecological diseases (vaginitis, endometritis, trichomoniasis of complex etiology, cervicitis and other diseases).

Conclusions

A unique technology of vacuum cryogenic crushing at -196 C^0 of medicinal plants and animal tissues has been developed for the purpose of manufacturing phyto-tissue preparations for veterinary medicine and pharmacology. At such a temperature (-196 C0) of vacuum-cryogenic crushing, biologically active components (BAC) in medicinal plants and tissues of animals and humans remain intact up to 98%. Phyto-tissue preparations, ointments, pastes, liniments, stimulants for use in veterinary medicine have been developed. Phyto-tissue preparations were used for dermatoses of complex etiology (psoriasis, eczema, vitiligo).

Data from clinical trials showed the following: recovery from innovative drugs was 80-85% within 35-40 days, with psoriasis; with eczema - 85-90% in 15-20 days. And the results of treatment with traditional drugs amounted to 45-50% and 37-40%, respectively. Phyto-tissue preparations are submitted to the Pharmacological Committee of the Republic of Uzbekistan for the serial production of Izbosarov ointment (for psoriasis), Exemin ointment (for eczema), Repigmin ointment (for vitiligo). The developed phyto-tissue preparations are patented in the Republic of Uzbekistan and the Russian Federation.

The results of many years of research by Professor U.K. UNESCO. In addition, the above work was nominated by the relevant competent organizations for the international medical award named after J. Rockefeller.

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