

## USE OF EFFECTIVE BIOLOGICALLY ACTIVE DRUG FOR TREATMENT AND PROPHYLAXIS OF A PURULENT CATARRHAL ENDOMETRITIS AT COWS



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### ABSTRACT

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Now in present veterinary practice there is the lack of medicines because of their high cost and sharp decrease in volume is sharply felt. The search of cheap, readily available and effective medicines becomes very actual problem. Now the development traditional therapy of mastitis, endometritis and detention of afterbirth it is carried out mainly on the basis of antimicrobial treatment. However application of chemotherapy is accompanied by a number of negative sides, in particular, insufficient medical efficiency, decline of stock-raising production's quality and quantity, the inhibiting influence on factors of microorganism's local and general resistance.

**Contribution/ Originality:** This study contributes in the existing literature of treatment mastitis and endometritis at cows.

### 1. INTRODUCTION

On this problem many scientists are engaged. So, Klimov N., Parikov V. , etc. studied a role of a microbial factor in etiology and pathogenesis of mastitis at cows [1]. Some authors in sphere of obstetric and gynecologic pathology studied non-drug methods of treatment [2]. The etiological structure at mastitis of cows during the different periods of reproduction is well studied. Influence of Propolisum on protective factors immunomodulation and use of spormetrin probiotic for a prophylaxis and treatment an endometritis at cows were studied. Beta-carotinum drugs for prophylaxis obstetric and gynecologic pathologies and influence of biologically active agents on rising of reproductive function at cows in the conditions of the North Kazakhstan area were studied.

In literature available to us there aren't Kazakhstan authors which studying fabric drugs for the treatment mastitis, endometritis at cows. Earlier we did work to preparation the diagnostic test and fabric drug for treatment subclinical mastitis at cows and also for treatment of a purulent-catarrhal endometritis at cows. In confirmation to

that obtaining copyright certificates: "A way of preparation fabric drug for treatment mastitis at cows", the copyright certificate No. 50650; "Way of treatment of a subclinical form of mastitis at cows", copyright certificate No. 50644; "Way of preparation of fabric drug", copyright certificate No. 52716; "A way of preparation fabric (placentin) drug for treatment and prophylaxis of afterbirth detention at cows", the copyright certificate No. 77310. Fundamental differences and advantages of this drug are reflected in the figure 1.

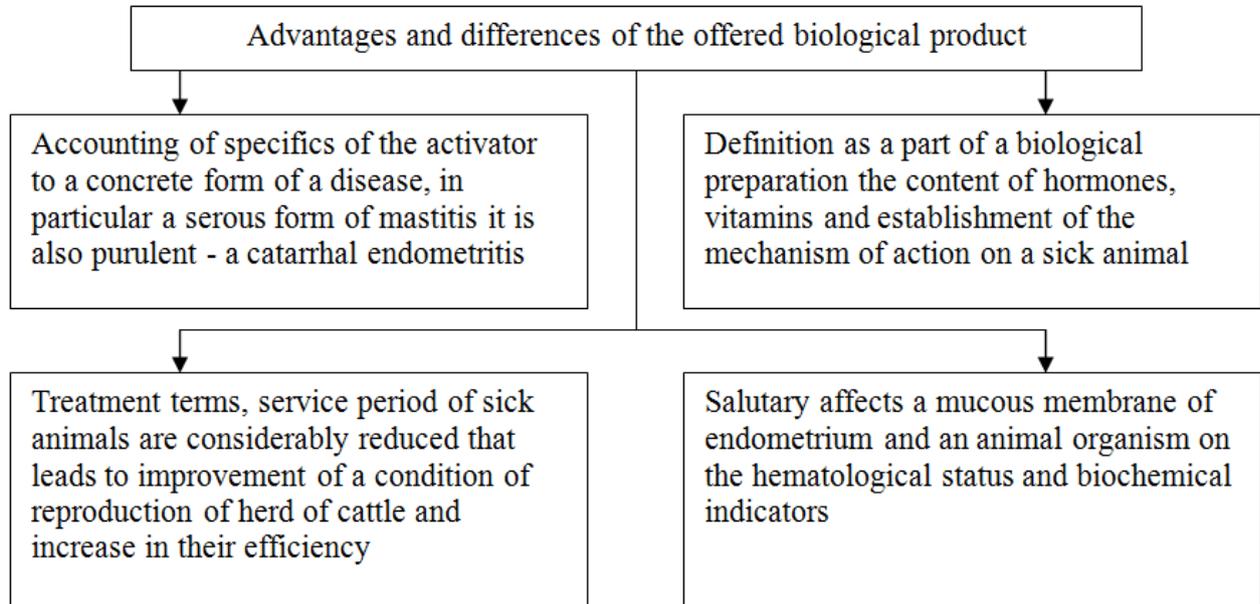


Figure-1. Fundamental differences of the offered drug

The diagnostic test offered by us is diagmastr which was used for diagnostics the latent form mastitis at cows without differentiation of illness forms. Now our work of studying diagnostic tests is taking into studying originator's specifics to a concrete form of illness, in particular a purulent-catarrhal endometritis at cows.

In studying the treatment and prophylaxis an endometritis at cows we prepared drugs from tissues of a mammary gland, genitals and a placenta of healthy cows. However, the physical and chemical structure, some aspects and the mechanism of drugs effect on an animal organism weren't completely disclosed. So it was studied physical and chemical structure of biological preparations and was given interpretation of the mechanism action. And also were determined the content of hormones, vitamins as a part of biological preparations and biologically active was established beginning of substances and the mechanism of their action on a sick animal.

The importance of the project is a creating domestic biological preparations on the basis of animals tissues and plant origin which have high therapeutic and preventive effectiveness.

In this regard the offered project is relevant. As a result of project is the reducing treatment terms, which lead to improvement of reproduction condition and rising of treatment efficiency and fastness.

The offered product has therapeutic effectiveness. By us was experimentally argued the scheme of treatment and their efficiency. Also was established influence of fabric drugs on the immune status and resistance of cows. In the article is given a comparative assessment of medicinal properties of the offered fabric drugs in comparison with the standard drugs, which used in veterinary obstetrics.

## 2. MATERIALS AND METHODS

1. The basis ways to achieve goals of research, justification of the chosen approach.

- degree of mastitis and endometritis spread at cows was studied in the farms of Northern and Central Kazakhstan on the basis the clinical trials.

- for definition of specific originators serous mastitis and a purulent-catarrhal endometritis at cows were conducted by researching milk and vulvas slime of animals.

For this purpose the milk and assays from vulvas slime were sowed on a meatpepton agar (MPA) with Endo and a meatpepton bloody agar (MPKA) and left in a thermostat at a temperature 37°C for 18-48 hours. After that was made identification of the grown colonies by studying their cultural properties. Colonies were selected various in a form, sizes, colour and carry out allocation of pure culture. Specific originators were established according to the schemes provided Berdzhis's determinant. For the purpose to determinate sensitivity of originators was applied a diffusion method by using agar with the standard disks impregnated in antibiotics.

- for studying new diagnostic test there are next methods were used :

A) chemical methods of research (SMT – Sindzyan mastitis test), which were based on mixing hydroxide sulphuric acid of sodium of 30-50 g, Na OH of 15 g, bromum, sulfur in volume 0,1 g, distilled water in volume 1000 ml and boiling.

B) milk methods of research, which were based on mixing milk in volume 2 ml and the test in volume 2 ml, waiting 10 seconds and making the conclusion.

- At implementation of the research goal from genitals of cows was prepared the drug. The technology of drug preparation was carried out by our technique offered earlier. During the experiment was framed highly effective medical drug.

- For selection a dosage and introduction frequency of the offered drug in treatment endometritis at cows were conducted series of experiments on laboratory animals. For the purpose of definition a medical dose of the offered drug were framed three groups of experienced animals.

- For assessment the biochemical status of cows in blood were defined the following indices: the general protein content by a refractometer method (refractometer RL – 2, Poland), protein fractions – an electrophoresis method (1% agar gel with pH = 8). Hematologic researches did by reagents of Lakhem firm (Czechoslovakia) and Biot-latest. When carrying out immunological researches at healthy and sick cows before treatment and 3, 6, 9 days after treatment were studied in peripheral blood the total quantity of leukocytes, T - In - O-lymphocytes (T – suppressor, T - helpers), the CEC, BASQUE (%), activity of lysozyme (mkg/ml), NST, fagotsites activity of neutrophils. The study of the immune status was carried out according to tests.

- the offered drug was tested on 3 experimental groups of animals in different variations. The first group was treated by the offered drug; the second group was treated by the offered medicine and fabric medicine; the third group was treated by the offered medicine, fabric medicine, uterus massage and furazolidon sticks.

- calculation of the offered drug's economic efficiency was carried out by accounting outgoings of veterinary actions during the treatment.

- are recommended to veterinary laboratories and also agricultural formations of the operation manual of medical medicine in case of it is purulent - a catarrhal endometritis at cows.

The received digital material will be processed by method of variation statistics.

### 3. RESULTS

The received results exerted positive impact on development of biological science. In the social plan the offered biological product from vegetable and animal origin allows to receive an environmentally friendly product harmless to human health.

On condition of endometritis treatment at cows by the standard methods the term of sick animals recovery was lasted on average 7-10days.. On condition of endometritis treatment at cows by the offered biological product term of sick animals recovery was reduced and lasted on average by 4 days.

On condition of endometritis treatment by the offered biological product effective insemination at cows occurred in the first months, service period terms were reduced from 50 to 35 days. It has brought to lengthening of lactation terms and increasing operational period at cows.

#### 4. CONCLUSION

Biologically active drug received from vegetables and animals fabrics and has stimulating, anti-inflammatory properties. Drug is convenient in application, has no toxicity, and doesn't exert negative impact on animal organism.

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**Contributors/Acknowledgement:** Both authors contributed equally to the conception and design of the study.

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