



## Comparative Indicators of Studies on Testing the Allergic Method for Brucellosis in Camels and Their Serological and Folk Reaction in the Study of Milk and Blood Serum for Brucellosis

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**Abstract:** The article describes the scientific research carried out on the diagnosis of brucellosis of camels in production conditions by seroallergodiagnostic means produced in the laboratory of brucellosis of the Research Institute of Veterinary Medicine.

**Key words:** brucellosis, bactrian, Dromedary, llama, breeding, immunoglobulin, antioxidant, pathogenic microflora, allergic test, lactation, PBS, AR, KBR (kubr), XR, RBT.

### Introduction:

#### Introduction.

Of great economic importance is the development in the republic of one of the branches of animal husbandry-camel, meat and dairy and wool. In addition, in many cases this animal is used as a labor force.

In Uzbekistan and neighboring CIS countries, two types of camels are bred - bactrians (double-humped) and dromedaries (single-humped). The hornless lama camels that exist in the world live mainly in the deserts of South America. The total number of camels in the world is about 12 million, including about 30 thousand in our country [1, 2].

The development of camel breeding is possible only in conditions of active veterinary activity. There are two breeds of Bactrians, namely Kazakh and Kalmyk. On the other hand, dromedaries are represented by two breeds - Turkmen and Kazakh [2].

Breeding work in camel breeding is carried out in three main directions: meat-wool, meat-dairy and dairy. On average, from each animal for 12 months, depending on the breed and direction of care, you can get from 6 to 11 kg of wool, from 1500 to 4000 kg of milk and from 500 to 800 kg of meat products [3].

Camel milk is a valuable food product with taste and healing properties. The fact that camel milk helps fight AIDS, hepatitis C, Alzheimer's disease, cancer, etc. Due to the high content of immunoglobulins in it, is mentioned in many literary sources. Camel milk contains a lot of antioxidants, vitamin C, calcium and other valuable substances that rejuvenate the human body [3].



However, the use of camel milk and dairy products requires quality control of these products, especially with regard to pathogenic microflora causing diseases common to animals and humans [4].

Among the infectious diseases registered among farm animals in the territory of the Republic of Uzbekistan, Brucellosis infection occupies a leading place.

The diagnosis of brucellosis in camels is made using serological reactions such as AR, CBR, RBT [5]. In the presence of clinical signs of brucellosis in camels, the obtained materials are examined bacteriologically (placed in a biosonde) and using PCR. In addition, there is information in the literature about the possibility of using an allergy test [6].

In the specialized literature there is brief information about testing camel milk for brucellosis using a color antigen intended for the study of cow's milk [4, 7, 8]. However, there are no data on various physiological conditions and the results of the study of the mammary glands of dairy camels during lactation.

### Goals and objectives.

VITI consists of testing on camels experimental series of color antigens for reaction to humans (XR), pink bengal test (PBS) and single brucellosis antigens for AR, CBR (kubr), prepared in the brucellosis laboratory, with camel milk and blood serum, as well as allergens from local cultures for the allergodiagnosis of brucellosis of animals.

### The results of the study.

We conducted relevant studies using separate brucellosis antigens for color antigen (XR), PBS (Pink Bengal test), AR, CBR (kubr) for reaction to humans in milk prepared in the Viti brucellosis laboratory, with milk and blood serum samples taken from animals at different times after birth. At the same time, in accordance with the current rules, milk was initially tested for XR (population reaction), while the quoted blood serums were tested for RBT (Rosbengal test), agglutination reactions in vitro (AR). Serological reactions (RBT, AR, CBR) were carried out in accordance with the instructions (scientifically based system, 2018). The data obtained are shown in Table 1.

**Table 1. Results of screening of milk and blood serum of camels for brucellosis in different periods after childbirth**

t/r.	group number	Time after birth (month)	Number of milk and serum sample	Verification methods			
				XR	RBT	AR	Allergic method
1	I	6	5/22,7	-	-	-	-
2	II	8	9/40,9	1/2,5	1/2,5	1/2,5	1/2,5
3	III	10	8/36,4	-	-	-	-
<b>Total:</b>			<b>22/100</b>	<b>1/2,5</b>	<b>1/2,5</b>	<b>1/2,5</b>	<b>1/2,5</b>

*Note: in fractional numbers: the denominator is an absolute value, the denominator is a percentage.*

As can be seen from the data in Table 1, positive indicators were obtained in 1 case from samples taken from 22 female camels studied, including in 1 case in the study of milk. In all cases, the positive indicator of the reaction with milk coincided with the results of serological studies. At the same time, the study of camel milk did not reveal the presence of specific features at different times of lactation. In addition, the study of the sensitivity of various areas of camel skin during allergic research was carried out in the laboratory of brucellosis *B.melitensis* and *B.abortus* was carried out using allergens prepared from cultures. The drugs were injected into the camels of groups I and II subcutaneously into the hairless area of the lower leg of the front left leg using a needle-free injector of the Bi-7 brand, as well as 1/3 of the neck of the camels of group III subcutaneously using an ocular syringe. The reading was recorded every 24, 48 and 72 hours. As can be seen from Table 1, with intradermal administration of an experimental series of allergen, a positive result was obtained, i.e. the positive results revealed in serological studies were confirmed.

### Conclusion:

1. Diagnosis of brucellosis in camels is based on serological and allergic studies;
2. In regions where camel breeding is developed, the lack of testing of milk obtained from them for brucellosis may increase the risk of transmission of the disease;
3. The milk of camels infected with brucellosis reacts positively to the stained brucellosis antigen, which means that this antigen can be used to fight brucellosis among camels.

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