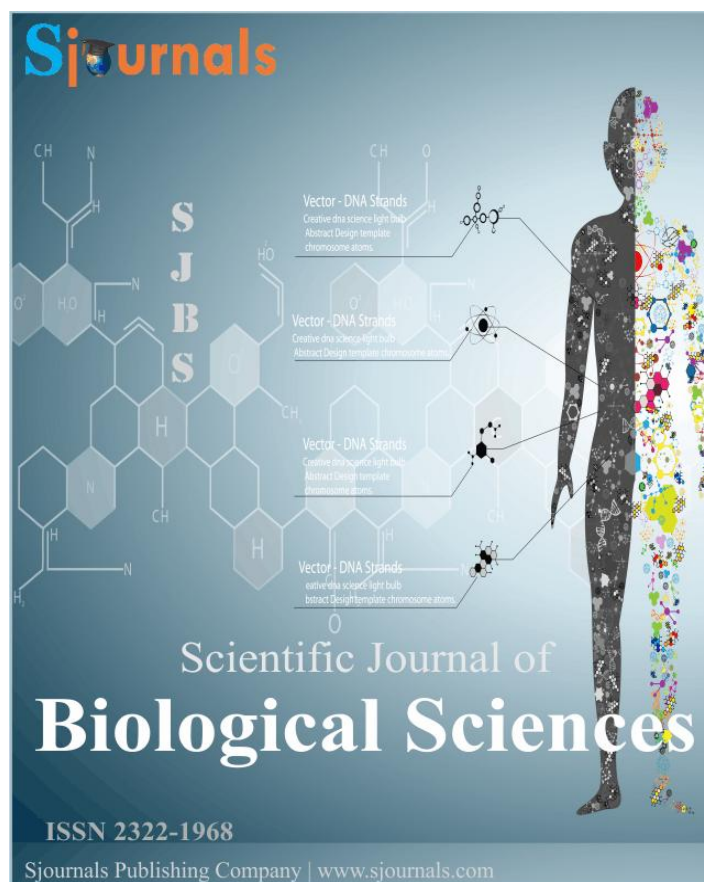


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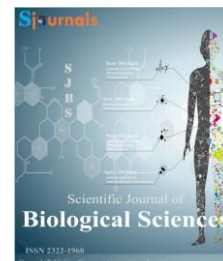
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**Short communication**

**Impact of bacterial and viral infections for barrenness of productive animals**

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ABSTRACT

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Historically the operational stages of artificial insemination of animals. The influence of some viral and bacterial infections on the reproductive systems in male animals has led to barrenness.

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**Introduction**

Reproduction - one of the basic functions of living organisms, which ensures the continuity of the species. Currently, the agro-industrial enterprises prefer artificial insemination. Only gaining popularity and is considered as a promising method dilution small unproductive animals artificial insemination.

The practice of artificial insemination of cattle, sheep and pigs was widespread in our country since the mid 30-ies of the last century. We used freshly seed that fertilized at once, or can be stored for several days. A breakthrough in the preservation of seed was made in 1951, when the empirically established that viability is maintained subject to freezing and storage at -79 °C. Later they began to use liquid hydrogen, and the seed was stored at a temperature of -196 °C. Calves born during fertilization with sperm that has been stored for over 10 years. The world's first experience of artificial insemination in dogs was held in Italy in 1780. Abbot Spallanzani

introduced a few drops of sperm in the male reproductive tract of the female dog, which successfully became pregnant and gave birth to 2 months of healthy puppies. The theory of fertilization at the time had not yet been established.

Only in the mid-twentieth century, researchers have resumed exploring possibilities of artificial insemination and the prospects that it opens up for the breeding work in animal husbandry. Artificial insemination is recommended in cases where the female, which has a set of useful breeding qualities and is of interest to breeders, there are congenital (violation of the vagina structure) or acquired (trauma) defects that make it impossible physical contact with a male; when one of the producers is a carrier of infectious agents transmitted sexually; when the producers, which are expected very good offspring, are far away from each other. For violation of reproductive function and impaired semen quality often result in infectious diseases of viral and bacterial etiology (Table 1).

**Table 1**  
Ehtipatogenez leading to infertility in male animals.

Kind of animal	Ehtipatogenez	
	Microbialnature	Theviralnature
Pig	p. Escherichia	sem. Circoviridae
	p. Corynebacterium	sem. Togaviridae
	p. Streptococcus	sem. Herpesviridae
	p. Staphylococcus	sem. Arteriviridae
	p. Pasteurella	sem. Coronaviridae
	p. Mycobacterium	sem. Orthomixoviridae
	p. Salmonella	
	p. Listeria	
	p. Mycoplasma	
	p. Leptospira	
	p. Brucella	
Cattle	p. Chlamydia	sem. Herpesviridae
	p. Mycoplasma	sem. Flaviviridae

In swine pathogens (Table 1) are divided into three groups. The first group includes conventional microorganisms common in almost all pig farms -esherihii, Corynebacterium, Streptococcus, Staphylococcus, Pasteurella, Mycobacterium, Salmonella, Listeria, Mycoplasma. They demonstrate a pathogenic effect in animals with impaired immunity. The second group includes enteroviruses pigs -tsirkovirus swine 2. The third group consists of classical swine fever virus, Aujeszky's disease, porcine reproductive and respiratory syndrome, Leptospira and Brucella. In reproductive and respiratory syndrome pigs with boar semen pathogen is released within 92 days after infection. Cases of violations of reproductive function, in which the isolated adenoviruses, reoviruses, viruses transmissible gastroenteritis, and encephalomyocarditis swine influenza.in vivo bacterial infections among pigs are very sensitive to Brucella suis. 5 biovars from this agent only three play an important role in the pathology reproduction pigs. In boars usually affects the testicles, leading to the emergence of orchitis and abjection with sperm. Insemination of sows with semen contaminated brucella, increases the frequency of abortion. Chlamydia trachomatis infections in pigs are relatively rare (6.2 -16.1% of cases).

Do bulls in recent years, often register chlamydia, mycoplasmosis, from virioz -infectionrhinotracheitis and viral diarrhea, which occur both in the form monoinfection and in associated form (Table 1). Chlamydia are typical of genital infections, their causative agents stand with sperm stored for a long time and the period of conservation in liquid nitrogen. As in vivo, and in vitro are well attached to any part of spermatozoa.

Experimentally proved that chlamydia have a toxic effect on the sperm and reduce its quality, fertilizing capacity and cause inflammatory changes in the male reproductive organs. Characteristic for chlamydia is a decrease in the volume of semen and sperm deterioration, in some cases even nekrospermiya and spermatoschesis. Methods electron microscopy found that chlamydia elementary bodies penetrate into the head of the sperm cell, Leydig cells and the connective tissue of the testis. Russian and foreign researchers determined

the selection of viruses and infectious bovine rhinotracheitis virus diarrhea semen sires and the possibility of transmission of pathogens by artificial insemination. Vaccination latently infected bulls does not prevent latent carrier of the field strain and vaccinated animals continue to be a source of infection of the pathogen. In the spread of viruses and bacteria, genital infections play an important role manufacturers, long-secreting agents with sperm.

All of these infections lead to infertility and male sperm require careful study as transmission factor. Changes in the reproductive tract can fix available research methods. So in the US in the study of male reproductive qualities of the cytological and bacteriological analysis of a semen. In case of inflammatory cells, the sperm sample is subjected to bacteriological examination for the presence of aerobic and anaerobic bacteria and mycoplasmas. According to these parameters of semen quality is evaluated as normal or register oligozoospermia, azoospermia, Teratozoospermia, asthenozoospermia, leykospermiyu, haemospermia. Bacterial and viral infection detect, using known ELISA techniques, ELISA, PCR. These methods of semen evaluations reveal only common disorders of the reproductive system of male animals. At the same time it remains unknown, as the causative agents of genital infections affect on male germ cells at the ultrastructural level and whether they affect the sperm acrosome. This requires methods such as transmission and scanning electron microscopy.

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