MIRZO ULUG‘BEK NOMIDAGI
O‘ZBEKISTON MILLIY UNIVERSITETI
JIZZAX FILIALI



"BIOTEXNOLOGIYANING RIVOJLANISH ISTIQBOLLARI VA MUAMMOLARI"

MAVZUSIDAGI RESPUBLIKA MIQYOSIDAGI ILMIY-TEXNIK ANJUMAN TO‘PLAMI





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МИНИСТЕРСТВО ВЫСШЕГО ОБРАЗОВАНИЯ, НАУКИ И ИННОВАЦИЙ РЕСПУБЛИКИ УЗБЕКИСТАН

ДЖИЗАКСКИЙ ФИЛИАЛ НАЦИОНАЛЬНОГО УНИВЕРСИТЕТА УЗБЕКИСТАНА ИМЕНИ МИРЗО УЛУГБЕКА

СБОРНИК ТЕЗИСОВ РЕСПУБЛИКАНСКОЙ НАУЧНОЙ КОНФЕРЕНЦИИ

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ROLE OF STAPHYLOCOCCUS HAEMOLYTICUS AND ANTIBIOTIC RESISTANCE IN VAGINAL AEROBIC VAGINITIS

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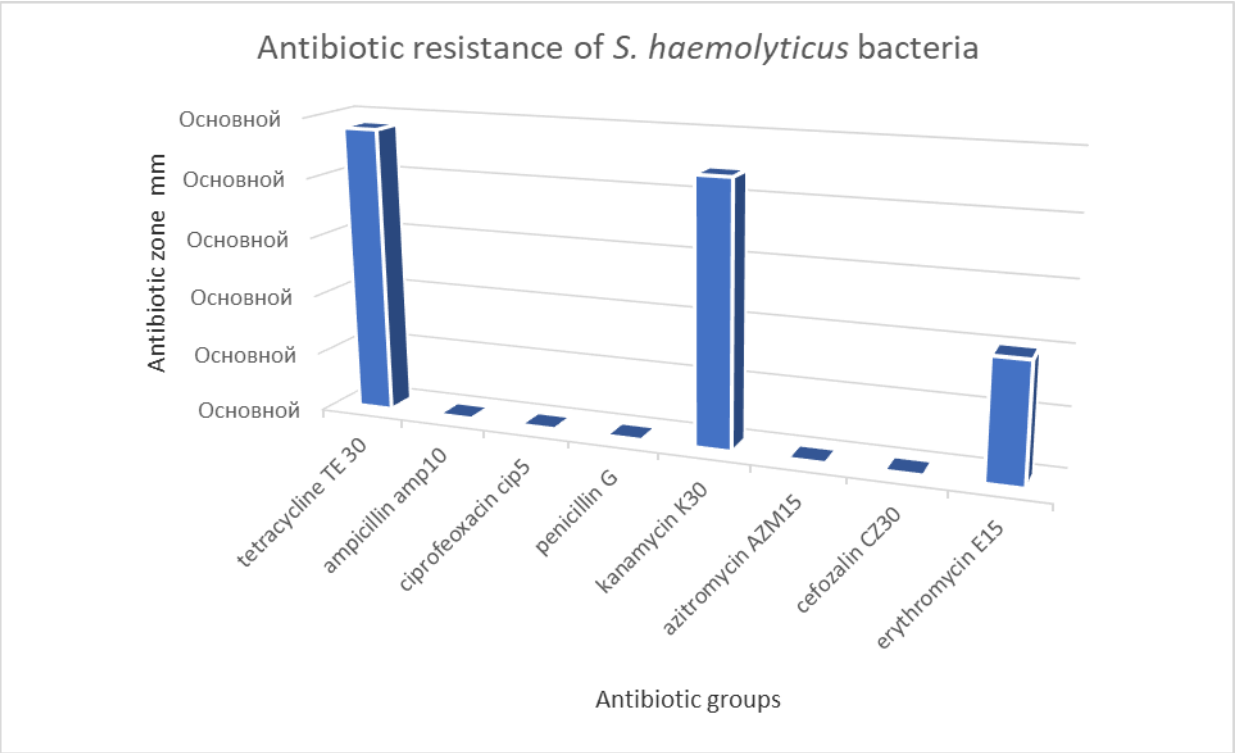
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Abstract: *Staphylococcus haemolyticus* (*S. haemolyticus*) is one of the predominant bacterial species found in aerobic vaginitis (AV) microbiota. This bacterium has a higher level of antibiotic resistance than coagulase-negative staphylococci, which makes it a clinically important pathogen. Studies have shown that *S. haemolyticus* has the ability to transfer antibiotic resistance genes to other staphylococcal species, which complicates antibiotic therapy. In addition, this bacterium is not only associated with aerobic vaginitis, but can also cause severe infections such as meningitis, prostatitis, urinary tract infections, and otitis media, especially in immunocompromised patients. In women, *S. haemolyticus* has been shown to cause dysbiosis of the vaginal microbiota, increase inflammatory processes, and promote the growth of other pathogenic microorganisms. This study evaluated the antibiotic susceptibility of S. haemolyticus strains associated with aerobic vaginitis and investigated their pharmacological properties. The results obtained confirm the high level of antibiotic resistance of *S. haemolyticus* and its clinical significance, and are of great importance in the development of AV treatment strategies.

Keywords: *S. haemolyticus*, antibiotic resistant, virulence.

Coagulase-negative staphylococci (CoNS) constitute the major microbiota of aerobic vaginitis [1]. These pathogens are under-recognized and precise species identification is not performed in many microbiology laboratories [3]. Clinical CoSS accounts for 10–20% of infections. In recent years, various investigators have described the increasing frequency of multidrug-resistant strains of *S. haemolyticus* [4]. *S. haemolyticus* is more resistant to antibiotics than any other CoSS, with the broadest spectrum of resistance observed among strains isolated from hospital settings. The presence of resistance genes in *S. haemolyticus* and its spread in hospital settings pose a potential risk, as this bacterium can harbor resistance genes and transfer them to other species. *S. haemolyticus* isolated from aerobic vaginitis in women showed high resistance to various antibiotic classes *S. haemolyticus* exhibits resistance to multiple antibiotic classes, including beta-lactams and fluoroquinolones, making treatment challenging.



The results of the chart show that *S. haemolyticus* is highly resistant to beta-lactam and fluoroquinolone antibiotics. This resistance may make it difficult for the bacteria to respond to antibiotic therapy. This increases the likelihood that it will cause significant clinical problems in the treatment of infections. In conclusion, this bacterium can exacerbate various inflammatory processes in women and pose difficulties in treatment due to its resistance to antibiotics. This situation indicates the need to improve infection control strategies.

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CULTURAL-MORPHOLOGICAL CHARACTERISTICS OF ISOLATES OF ENDOPHITE BACTERIA ISOLATED FROM MEDICINAL PLANTS

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Abstract: A total of 45 isolates were isolated from the roots, stems, and leaves of medicinal plants found in fields and yards such as Plantago major L., Hypericum perforatum L., Kalanchoe daigremontiana, Cichorium intybus L., Melissa officinalis L., Mentha piperita L., Matricaria recutita L. Among them, it was observed that endophytic bacteria were found relatively more in Kalanchoe daigremontiana and Cichorium intybus L. The KD-L7 isolate from the leaves of the medicinal plant Kalanchoe daigremontiana has a high affinity for 1% casein and 1% starch, and its hydrolysis zone size was found to be 6-10 mm.

Key words: endophyte, medicinal plants, microorganisms, biologically active substances, plant-endophyte symbiosis, Bacillus amyloliquefaciens.

It is known that various endophytic microorganisms coexist in medicinal plants. According to the studies presented in the literature, it was found that endophytic microorganisms mainly synthesize biologically active compounds. Currently, one of the important tasks is to solve various issues in agriculture, that is, to improve plant nutrition, to protect them from various phytopathogens, to increase soil fertility and the yield of agricultural crops, to create biological preparations based on endophytic bacterial isolates isolated from medicinal plants, and to use them effectively [1-2]. The aim of this study was to study the cultural and morphological characteristics of endophytic bacterial isolates isolated from medicinal plants. For this purpose, 45 bacterial isolates were isolated from the internal tissues of the roots, stems, and leaves of medicinal plants such as sedum, dalchoi, chamomile, sachratki, kalanchoe, lemon, and mint included in the pharmacopoeia list. Some isolated endophytic bacterial isolates were studied for their susceptibility levels to 1% casein and 1% starch and parameters such as hydrolysis zones, color, transparency, edge and surface parts of colonies.

According to the obtained results, PmL - R1 and PmL - R2 isolates isolated from the roots of Zubturum (PmL.), PmL - S4, PmL - S5 and PmL - S6 PmL - L7 isolates from the stem and leaves of the plants selected for research were resistant to 1% amylase. PmL - S3 and PmL - L7 isolates isolated from the stem to 1%