STUDY OF THE ANTAGONISTIC PROPERTIES OF *C. UTILIS* IN RELATION TO THE RESIDENT MICROFLORA OF THE ANIMAL ORGANISM.

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Introduction

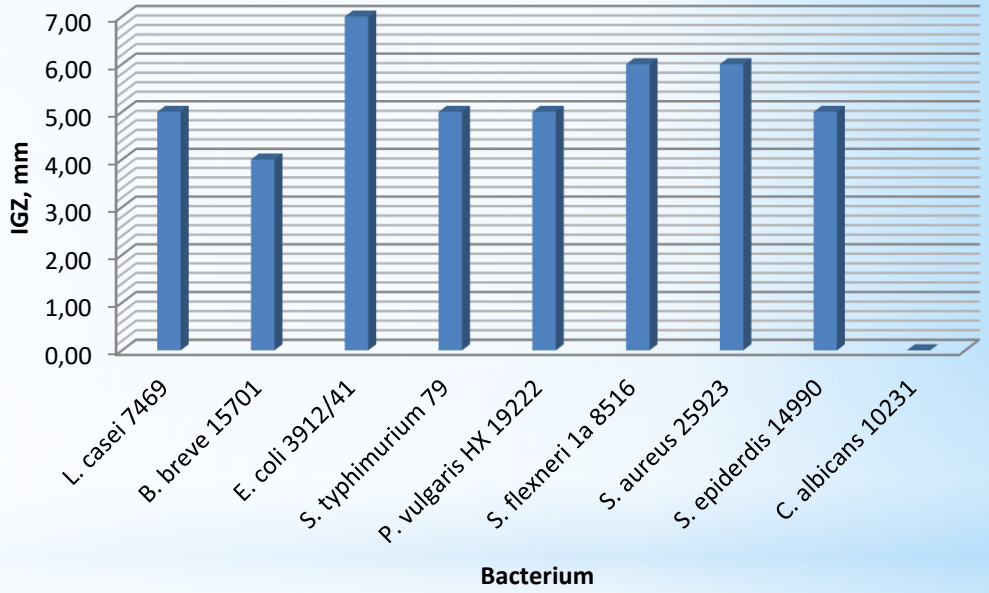
C. utilis yeast is widely used in industry for the production of fodder protein, amino acids, vitamins, and enzymes.
The aim of the study was to study the antimicrobial activity of the *C. utilis* CY 302 strain against bacteria.

Material and methods

We have studied the antimicrobial activity of *C. utilis* CY 302 against such collection strains as *E. coli* 3912/41, *S. flexneri* 1a 8516, *S. enterica serovar Typhimurium* 79, *S. epidermidis* ATCC 14990, *S. aureus* ATCC 25923, *Proteus vulgaris* HX 19 222, *L. casei subsp. Rhamnosus* ATCC 7469, *B. breve* ATCC 15701, *C. albicans* ATCC 10231 by using the agar blocks method and by measuring the inhibition growth zone (IGZ, mm) accompanied by the target cells death zone. The yeast strain was grown on agar Sabouraud (HiMedia Laboratories Pvt.Ltd, India) at 28±1 °C for 3 days, and the test cultures were grown on differential diagnostic media for each bacterial species (HiMedia Laboratories Pvt. Ltd, India) at 35±2 °C overnight.

Results

A weak antimicrobial effect was observed with respect to *L. casei* and *B. breve*, the IGZ was 5.0 and 4.0 mm, respectively. The halos of inhibition against pathogenic bacteria were 7 mm for *E. coli*, 5 mm for *S. typhimurium*, 5 mm for *P. vulgaris*, 6 mm for *S. fiexneri*, 6 mm for *S. aureus*, and 5 mm for *S. epidermidis*. After incubation there was noted the absence of IGZ in the wild *C. utilis* CY 302 strain in relation to the *C. albicans* ATCC 10231 strain from the collection.



Picture 1. Antagonistic activity of *C. utilis* in relation to bacteria cells at 35±2°C overnight.

Conclusion: As a result of the studies the antagonistic potential of the yeast isolate *C. utilis* CY 302 was revealed.

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