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## Biosynthesis of the subtilisin-like serine proteinase of *Bacillus intermedius* under salt stress conditions

Kayumov A., Balaban N., Mardanova A., Kostrov S., Sharipova M.  
*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

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### Abstract

The biosynthesis of the subtilisin-like serine proteinase of *Bacillus intermedius* 3-19 by the recombinant strain *Bacillus subtilis* AJ73(pCS9) was found to be enhanced under salt stress conditions (growth in a medium containing 1 M NaCl and 0.25 M sodium citrate). In a recombinant strain of *B. subtilis* deficient in the regulatory proteins DegS and DegU, which control the synthesis of degradative enzymes, the expression of the proteinase gene was inhibited. In contrast, in the strain *B. subtilis* degU32(Hy), which provides for the overproduction of proteins positively regulated by the DegS-DegU system, the biosynthesis of the subtilisin-like proteinase of *B. intermedius* 3-19 increased by 6-10 fold. These data suggest that the DegS-DegU system is involved in the positive regulation of the expression of the subtilisin-like *B. intermedius* proteinase gene in recombinant *B. subtilis* strains. © Nauka/Interperiodica 2006.

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### Keywords

*Bacillus*, Recombinant strain, Salt stress, Subtilisin-like serine proteinase, Two-component system