PRODUCTION OF BETA-LACTAM ANTIBIOTICS BY GENETICALLY MODIFIED NON-NATURALLY PRODUCING MICROORGANISMS

ABSTRACT

The present invention describes the transformation of a microorganism that does not naturally produce a beta-lactam compound with polynucleotides involved in the biosynthesis of beta-lactam compounds and the use of such transformed microorganisms in the production of beta-lactam compounds or in the identification of genes or factors involved in the synthesis of a beta-lactam compound. For example, the genes encoding ACV, IPNS, AT and PCL from P. chrysogenum are inserted into S. cerevisiae by genetic engineering.