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## **The resistance to antimicrobial compounds**

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The natural resistance (intrinsic) defines the ability of a microorganism to be insensitive to an antibiotic. Intrinsic resistance genes are genetic apparatus of the cell and makes the very existence of bacteria in natural environments where there is a wide variety of substances that inhibit the growth or even toxic. The bacteria in natural environments have a reserve of any inhibitor resistance genes whose existence was revealed experimentally. Soil bacteria have the ability to metabolize biosynthesis inhibitors or chemical synthesis, they use as the sole source of C and N (aminoglycosides, fluoroquinolones, etc.). Target inaccessibility due to the impermeability of structures as the outer membrane of Gram-negative bacteria, is a passive resistance. But inaccessibility target can be an active process. For example, the activity of efflux pumps, energy dependency, which eliminates the drug against a concentration gradient. Antibiotic resistance is always a genetic substrate. The populations of bacterial pathogens and saprobionte, is an important reserve of resistance genes. Resistance is acquired by multiple genetic mechanisms. Activation of resistance genes in the presence of the inducer; by chromosomal mutations in genes that modify the target; as a result of expression of a chromosomal gene dormant; consecutive acquisition exogenous genes by gene transfer mechanisms. Knowledge of the mechanisms that determine antibiotic resistance and causes that contribute to their development, is the first step in preventing microbial infections and the development of new antimicrobial substances. PCR tests were performed on a total of 150 strains gram negative.

## **Biography**

Ciuca Alina Maria is a student at the Faculty of Medicine Carol Davila Bucharest. In 2014 she participated in numerous national conferences and 3 international symposia.

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