

Russian and American scientists investigated the genome of the Escherichia coli bacteria (Escherichia Coli) and found unique structures similar to studs that affect the work of genes. These structures were found thanks to the cooperation of scientists from Moscow State University. M.V. Lomonosov and the Institute of Biology of the Gene of the Russian Academy of Sciences.

The discovered mechanism can help in creating new ways to combat the resistance of bacteria to antibiotics. This was reported by the press service of Moscow State University.

Microorganisms can exchange genes with each other, even if they are not relatives. This allows pathogens to quickly adapt to changes in the environment, including resistance to antibiotics. E. coli is one of the most common types of bacteria, with high antibiotic resistance.

The results of the study will help to better understand how bacteria exchange genes and develop methods for preventing the transfer of resistance genes to antibiotics.

"[Учёным удалось] To identify special spatial structures (studs and clusters of studs), providing inactivation of horizontally transferred genes. It is also shown that the contacts between such studs can hold nearby sections of chromosomes containing horizontally transferred genes, which should contribute to the further transfer of these genes through recombination," the press service of the Moscow State University reports.