

PLASMID, REPLICON, ENTEROCOCCUS *FAECALIS*, COPY NUMBER, INHERITANCE, VECTOR SYSTEMS

Chao Yu

Faculty of Biology, Department of Genetics, Belarusian State University
Minsk, Belarus

Objects of study: *Enterococcus faecalis* , *Echerichia coli*

Mission: selection of conditions for cultivation, work out methodology of measuring lactate dehydrogenase activity, choosing the conditions for transformation (electroporation) *Enterococcus faecalis*. Explore the nature of inheritance of plasmids in the strain *Enterococcus faecalis* , to determine the structural stability of plasmids into strains.

Methods: microbiological (cultivation of microorganisms , studying the kinetics of growth and growth rate under different conditions , identification of the spectrum of antibiotic resistance , the replica method) , method of molecular genetics (electroporation, excretion and purification of DNA, restriction analysis , electrophoretic analysis of PCR) , spectrophotometric.

There were chosen the conditions for cultivating the cells and for electroporation of cells of the strain *Enterococcus faecalis* as a result of the conducted work. There were conducted the analysis of the inheritance of different vector molecules in the cells of these strains. Preservation of plasmid replicon in the cells of the strain *Enterococcus faecalis* for 20 generations under nonselective conditions.

The method of disintegration of cells was perfected. It is shown that the optimum method of cell disintegration is ultrasonic disintegration of cells .