

## Abstract

A Human has a tendency to change everything around him according to his desire, but, in many cases, he does not think about the results. Even a slight change in the environment can lead to upset the balance. Today's technological progress allows a human to voluntarily change the genotype of animals and plants to benefit from it. Genetic engineering researches the problems of genotype transformation. The methods are very complicated. The essence of some of them is that a particular gene or group of genes will be built into or excluded from the genotype of an organism, the presence or absence of which may even be beneficial.

Such experiments are mainly carried out on prokaryotic (organisms that do not have nuclei) organisms and viruses, but undoubtedly, they are also performed on eukaryotic organisms (organisms that have nuclei).

Genetic engineering opens new horizons in medicine as well. It is about changing the genes inherited from a human's diseases, i.e. the "sick" genotype's cardinal cure.