



GENETIC ENGINEERING

INTRODUCTION:

Genetic engineering, recombinant DNA technology, genetic modification/manipulation (GM) and gene splicing are terms that are applied to the manipulation of genes, generally implying that the process is outside the organism's natural reproductive process. It involves the isolation, manipulation and reintroduction of DNA into cells or model organisms, usually to express a protein to reach desired effects. The aim is to introduce new characteristics or attributes physiologically or physically, such as making a crop resistant to a herbicide, introducing a novel trait, enhancing existing ones, or producing a new protein or enzyme. Successful endeavours include the manufacture of human insulin through the use of modified bacteria, the manufacture of erythropoietin in Chinese hamster ovary cells, and the production of new types of experimental mice such as the OncoMouse (cancer mouse) for research.

OBJECTIVE

The following activity is for students with a beginner or intermediate level, you will be able to practice looking at the following reading to find specific key words and the answers requested, you will also be able to see certain items which you will have to pay very close attention to, in order to practice detailed reading, and also to get to know the different points of view that are relevant to this topic.

PROCESS

The main goal of this work is to find specific information through the resolution of questions and exercises. Enter the proposed webpages, answering the questions and resolving the exercises after.

At the end of the exercises you will find a section of suggested answers.

EXERCISE 1

Enter the following webpage and answer the following:

<https://repstein.faculty.drbu.edu/GEessays/engineerhumans.html>

1. What kind of genes have been used for this technology?
2. What has been worked on using human cells?
3. What is cloning?
4. What is the best example for the cloning?
5. Explain what gene therapy is and if it has worked.
6. Why are scientists studying these techniques?

EXERCISE 2

Carefully read the next page and briefly write about what the *GREENPEACE* organization believes about this topic.

<https://history.greenpeace.org/aotearoa/genetic-engineering/>

EXERCISE 3

Choose a profession:

- Doctor
- Activist
- Scientist

Now write a summary from the point of view you chose, based on what you read before.

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