List organisms used for research

by:
abdelmalek elhashani & Hadeel elabyde
2nd year PharmD
Welcome!!
By the end of this presentation
You will be able to:

01 Define geneticist
02 Describe time line
03 List organisms used for research
04 List application of genetics
05 Advantages and disadvantages of genetic engineering
Genetics

Is the study of genes, genetic variation, and heredity in living organisms.
Timeline

8000 BC
humans begin altering livestock

1888
chromosome discovered

1996
Dolly the sheep cloned

future
ultra high-speed sequencing technology

300 BC
grafting techniques developed

1953
structure of DNA discovered

1998
rough draft of human genome map produced
List organisms for research
A budding yeast

Fruit fly

A nematode
Thale cress, a member of the mustard family

Mouse

Human
Orange bread mold

Tetrahymena
(A protozoan)

Paramecium
(A protozoan)
A green alga

A garden pea

Corn
Genetic engineering has applications in:

- Medicine
- Research
- Industry and agriculture
- Used in a wide range of plants, animals and microorganisms.
Advantages and Disadvantages of Genetic Engineering

- It allows for a faster growth rate
- It can create an extended life
- Specific Traits can be developed
- New products can be created
- The nutritional value of foods can be less
- There can be negative side effects that are unexpected.
- The amount of developed can be less favorable
- This knowledge can be easily abused.
National Center for Biotechnology Information (NCBI)

- Learn.
- Analyse.
- Research.
Summary of this presentation:

• Genetics is the study of heredity in living organisms.
• Genetic engineering has applications in medicine, research..etc.
• Organisms for research: (fruit fly and human....etc.
• Advantages & disadvantages.
• Very importune website (NCBI).
References:

- https://news.sanfordhealth.org/genetics/ancient-farmers-unearthed-genetics/
- [Peter_J._Russell]_iGenetics_a_molecular_approach (chapter 1/ page 6)
Thank you