# APPLICATIONS OF GENETIC ENGINEERING

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# INTRODUCTION

## Genetic Engineering

(also called genetic modification)

The process involving laboratory-based technologies to alter the DNA makeup of an organism

# Four Major Applications

## MEDICINE

Vaccines development and Genetic Disorders

## AGRICULTURE

Genetically modified agricultural produce

## EVOLUTION

Developmental Genetics and inheritance.

## TAXONOMY

The science concerned with classification of organisms

# TAXONOMY

classifying organisms in all aspects using genetic Engineering

01

Research of family trees

02

Clinical analysis of genes

03

DNA testing

04

Reaching a conclusion

# Agriculture

- GMOs (Genetically Modified Organisms)
- Modified Pesticides
- Increasing produces

# 191,700 000 000 hectares

GMO statistics from 2019 reported that the total land GM crops worldwide


GENETIC MEDICINE

# GENE THERAPY

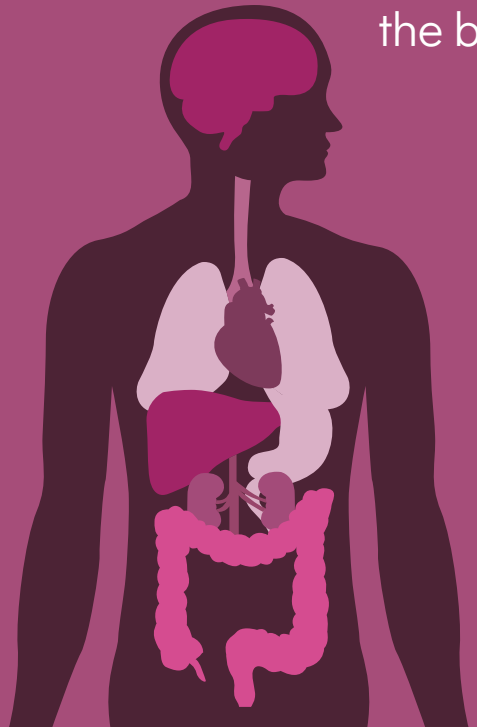
The Medical approach of treating the underlying genetic problem

## Medicine Production

Use of genetics to produce drugs and hormones like Insulin

# Synthetic Organs

Genetics plays a role in making the base for synthetic organs



# Evolutional tweaking

Using genetics to fix diseases will ultimately affect the evolutionary processes

# Conclusion

- What is Genetic Engineering?
- Agricultural Applicaltions
- Taxonomy
- Genetic Medicine

# THANK YOU FOR YOUR TIME

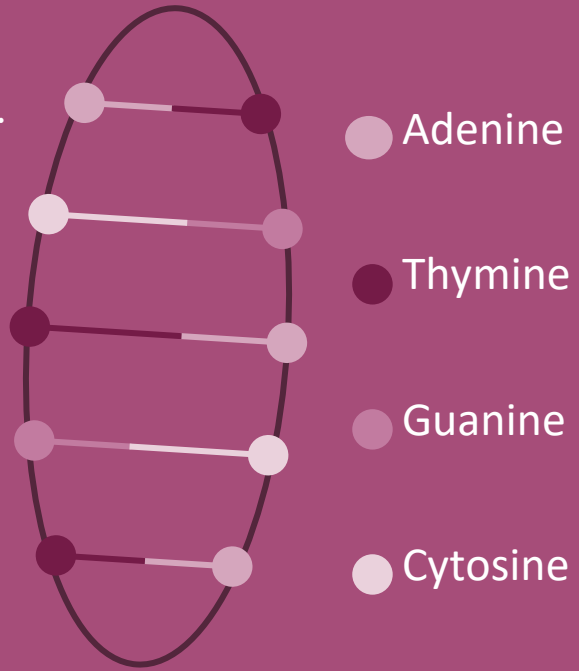
Do you have any questions?

# What is DNA?

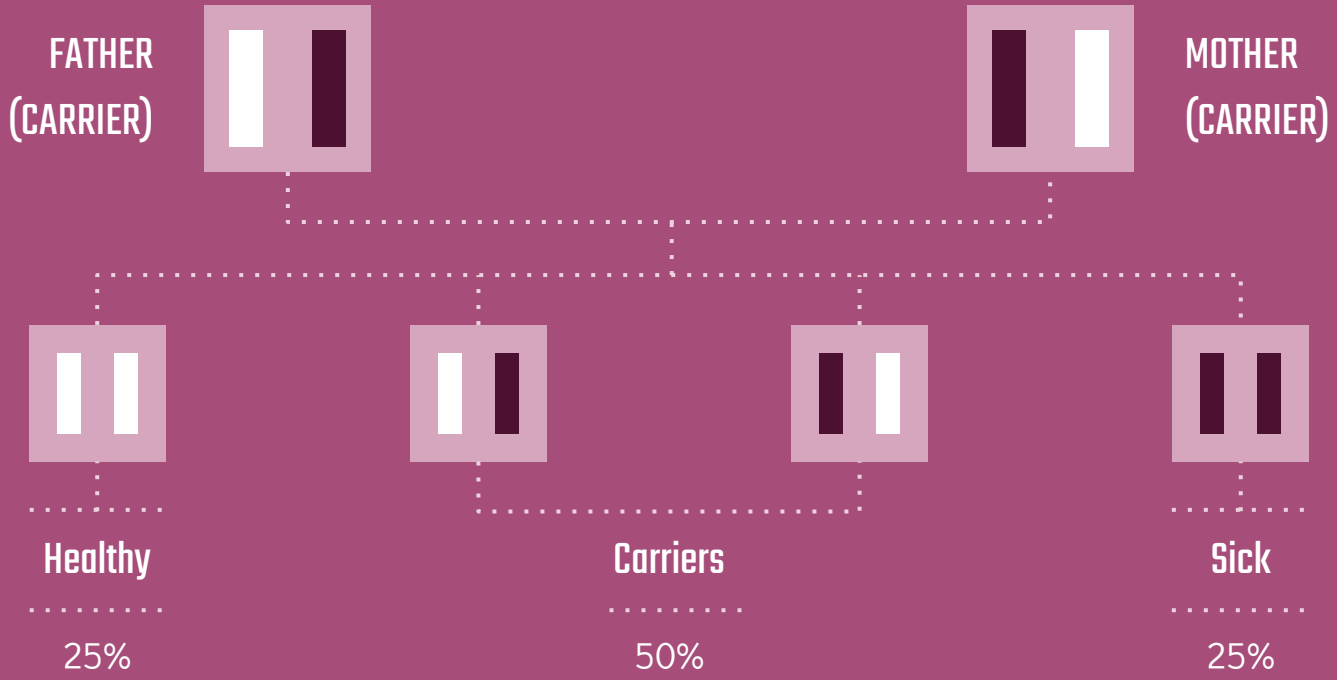
## DNA

Is the chemical construct of our bodies.

| | |
|---|---|
| Adenine | Thymine |
| Guanine | Cytosine |
| Thymine | Adenine |
| Cytosine | Guanine |



# Inheretance & Genetic Disorders



“ With the advent of genetic engineering the time required for the evolution of new species may literally collapse..”

—Dee Hock