

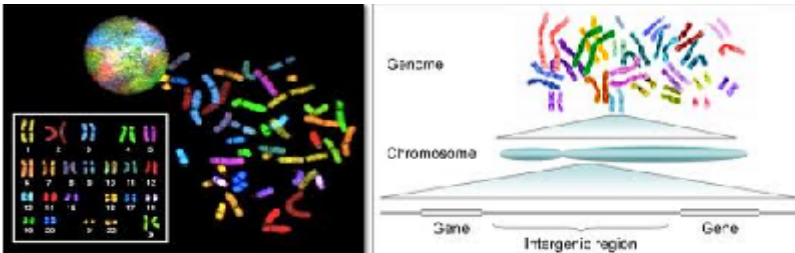
Human Genome Project

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HGP



The Human Genome Project is an international [scientific research](#) project. Its goal is to determine the sequence of chemical base pairs of [DNA](#) and to map them for further studies. Approximately 92.3% [genes](#) of the [human genome](#) have been mapped till date.



In 1990 the project was headed by the scientist Ari Patrinos of USA.

In 2000 the abstract of the projects was released. But in 2003 only the complete set of details has been explained. Further researches on various areas of HGP are under process.

Why should we need gene mapping?

It is a much needed one, because it has a main role in the development of medicines and health care purposes.

Is this HGP useful for humans only?

No, it is not! This Project is not only to understand the [genetic](#) makeup of the [human](#) species, but also focused on many other nonhuman organisms such as [E. coli](#), the fruit fly, and the lab mouse. It is one of the largest single investigative projects in modern science.

A genome is a complete group of genes. It is unique for each individual. But cloned organisms and identical twins are outside of this rule. Mapping "the human genome" involves sequencing multiple variations of each gene. Only few [human cells](#) have been mapped by this project and many are remain unsequenced.

Why genome is very important?

- The entire DNA in an organism with its genes are called as genome.
- Genes carry genetic information to synthesis proteins, which is very important to all organisms.
- These proteins determine the look, behavior etc..
- The human genome has 3 billion pairs of bases by the repeated sequence of the 4 nucleotide bases A T G C.

Goals of the Human Genome Project

- Identify all the approximately 20,000-25,000 genes in human DNA,
- Determining the sequences of the 3 billion chemical base pairs that make up human DNA,
- Store the information in databases,
- Improve tools for data analysis,
- Transfer related technologies to the private sector, and
- Address the ethical, legal, and social issues (ELSI) that may arise from the project.

Researchers studied the genetic organization of several nonhuman organisms like E. coli (the human gut bacterium), the fruit fly, and the laboratory mouse to make achieve of the goal of HGP.

Benefits of HGP:

The findings of HGP is very useful in many areas like molecular medicine, bioarchaeology, anthropology, evolution, and human migration, DNA fingerprinting, agriculture, another other areas related to living organisms.

Want to know more about Human Genome details?[Click here](#) to schedule live online session with e Tutor!

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Reference Links:

- http://en.wikipedia.org/wiki/Human_Genome_Project
- <http://www.youtube.com/watch?v=gkQJ26DAxfs>
- <http://www.youtube.com/watch?v=ubQsaoHBxsU&NR=1>

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