

THE EVOLUTION OF GENOMICS



1865

Gregor Mendel establishes the principles of inheritance through the meticulous study of pea plants.

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1953

The structure of DNA is resolved using crystallographic data by Watson, Crick, and Franklin.

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1972

The first complete sequence of a protein-coding gene is determined in the laboratory of Walter Fiers.

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1977

Sanger develops chain-termination sequencing, also known as 'Sanger sequencing.'

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1985

PCR is invented by Kary Mullis.

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1987

Hood and Hunkapiller at Applied Biosystems automate Sanger sequencing.



1996

Work from Ronaghini, Karamohamed, Pettersson, and Nyren develop pyrosequencing, ushering in second-generation sequencing.

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2001

The first draft of the human genome sequence is published.

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2003

The Human Genome Project is completed under budget two years ahead of schedule, with 99% of the euchromatic regions identified.

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2005

The 454 System, the first commercially available NGS platform, is launched.

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2005

The 'HapMap,' or haplotype map project, sequences over 1 million SNPs.

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2012

The 1000 Genome Project Consortium publishes the genomes of 1,092 individuals.

[Check out this data](#)



2012

The Encyclopedia of DNA Elements, ENCODE, assigned biochemical function to 80% of the genome.

[Check out this data](#)



2018

The Pan-Cancer Atlas, a cornucopia of data with multi-omic information for over 10,000 tumors, goes live.

[Check out this data](#)



2022

The Telomere-to-Telomere consortium completes the human genome! This time including heterochromatic regions.

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