

History of DNA Research

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Discovery of DNA

History of molecular biology



DNA is the genetic material which decides the traits in organism was a mystery in early days.

Many biologists/scientists were working on various areas of research to find it out how genetic information was passed along the generations. It was discovered and approved by all biologists after a long research processes. Let's now discuss the various scientists, their research and contribution to the world of biology.



Friedrich Miescher:

- The [Swiss](#) physician [Friedrich Miescher](#) discovered a microbe in the pus cells from the thrown out surgical bandage in 1869.
- He found that it was residing in a cell nucleus. He named it as 'Nuclein.' As it resided in the nuclei of cells, he called it "nuclein".

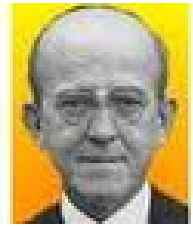
Phoebus Levene:

- In 1919, he identified the nucleotide sequences, sugar & phosphate groups.
- [Phoebus Levene](#) found that nucleotide units of DNA linked together with the phosphate groups.
- He thought the chain was short and the bases repeated in a fixed order.

[William Astbury](#)

[William Astbury](#) in 1927 demonstrated the first [X-ray diffraction](#) patterns of the DNA structure.

Frederic



Frederick Griffith

- That the [traits](#) of the "smooth" form of the Pneumococcus, a bacteria, could be transferred to the "rough" form of the same bacteria by mixing killed "smooth" bacteria with the live "rough" form was discovered by [Frederick Griffith](#) in 1928. That DNA carries genetic information is proved by him.

[Oswald Avery](#), Colin MacLeod and [Maclyn McCarty](#):

- Identified DNA as the [transforming principle](#) in 1943.

Hershey–Chase

Identified the DNA's role in [heredity](#) in 1952.



Watson and Crick

In 1953, James D. Watson and Francis Crick confirmed the DNA double-helix model.



Rosalind Franklin and Raymond Gosling

These scientists took a X ray diffraction image of the DNA double-helix DNA in 1952 and found that the DNA bases are paired.

Erwin Chargaff

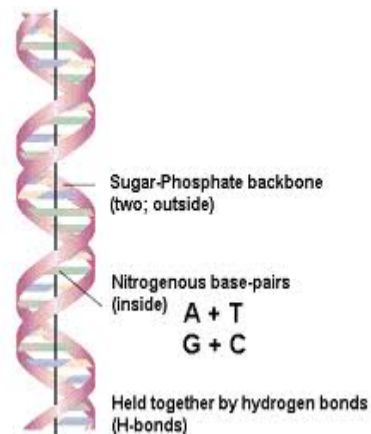
Information obtained through private communications from in the previous years was proved by them. Double helix configurations were established by [Chargaff's rules](#).

Meselson–Stahl:

The replication mechanism of DNA is confirmed by these scientists in 1958 through the [Meselson–Stahl experiment](#).

[Khorana](#), [Holley](#) and [Nirenberg](#):
They identified the genetic code.

Watson and Crick model of DNA



In 1962, after Franklin's death, Watson, Crick, and Wilkins jointly received the [Nobel Prize in Physiology or Medicine](#). DNA is a genetic material which can be passed as a trait to the next generation. Not only characteristics, but also diseases and base modifications can be passed on to the offsprings. DNA has 4 nucleotides and with the support of sugar, phosphate and hydrogen bonds nucleotides are placed in the double helix.

In 1957, Crick explained about the [central dogma of molecular biology](#). This gives the information and relationships between DNA, RNA, and proteins.

Want to know more about DNA function and structure? [Click here](#) to schedule live online session with e Tutor!

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Reference Links:

- <http://en.wikipedia.org/wiki/DNA>
- http://nobelprize.org/educational/medicine/dna_double_helix/readmore.html
- <http://library.thinkquest.org/20830/Textbook/HistoryofDNAResearch.htm>
- <http://www.angelfire.com/ks3/deoxyribonucleicacid/history.html>

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