



Rosalind Franklin

Rosalind Franklin was born on the 25th of July, 1920 in London. She displayed exceptional intelligence from early childhood at age 15 knew she wanted to be a scientist. She studied physics chemistry and mathematics at Cambridge winning multiple awards. In 1945 she earned a doctorate in physical chemistry. Rosalind died of ovarian cancer at age 37.



ROSALIND FRANKLIN

BORN

25 July 1920

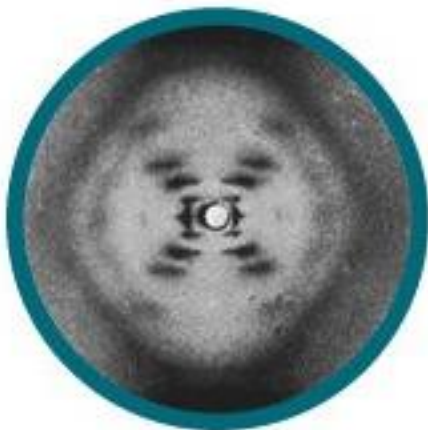
DIED

16 April 1958

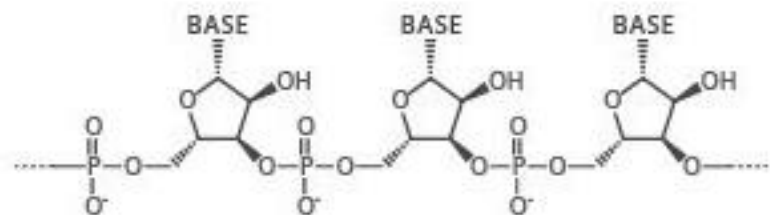


Rosalind Franklin was a chemist and X-ray crystallographer whose work was instrumental in the discovery of the structure of DNA. She missed out on a Nobel Prize for her work as they are not awarded posthumously.

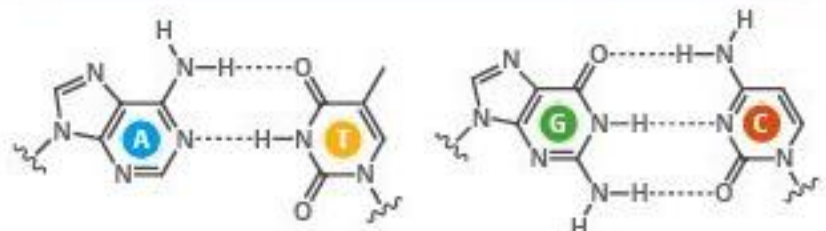
PHOTOGRAPH 51 AND THE STRUCTURE OF DNA



Photograph 51 is an X-ray diffraction image of DNA taken during Franklin's research. It was crucial in developing a model of DNA and confirming its double helical structure.



DNA is a polymer made up from monomers called nucleotides. A sugar phosphate backbone (above) forms the two strands, which are held together by hydrogen bonds between the bases found on these strands (below).



ADENINE (A) & THYMINE (T)

GUANINE (G) & CYTOSINE (C)

While working at King's College Rosalind used X-ray crystallography to obtain the above high resolution photo (Photo 51) of crystallised DNA fibres. From this it could be deduced that DNA has a helical structure and that the phosphates were on the outside. James Watson and Francis Crick were shown the photograph by Maurice Wilkins without Rosalind's knowledge. 4 years after Rosalind's death, Watson and Crick won a Nobel prize for solving the structure of DNA.

