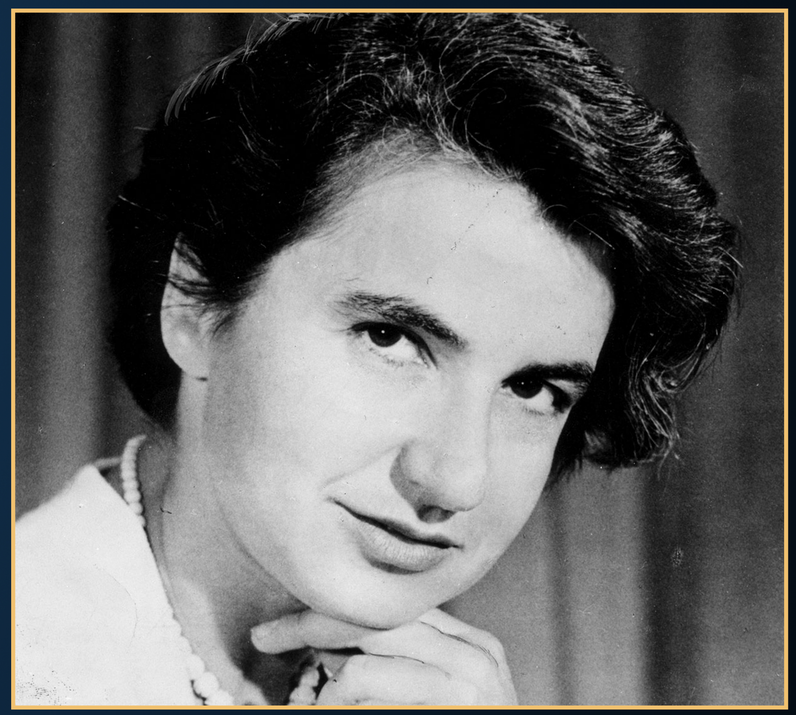
Portraits

Highlighting the exceptional contribution of European Jewish Women

Rosalind Franklin

Physical chemist and X-ray crystallographer

(1920-1958)



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“Science and everyday life cannot and should not be separated.”

Rosalind Elsie Franklin was an English physical chemist and X-ray crystallographer born on 25 July on London. Her pioneering work was central to the understanding of the molecular structures of DNA (deoxyribonucleic acid), RNA (ribonucleic acid), viruses, coal, and graphite. Although it was her crucial experimental data that enabled James Watson and Frances Crick to solve the structure of DNA as early as 1953, neither thanked her during their Nobel Prize speech. It was only in the late 1990s that her contribution was properly acknowledged.

Rosalind Franklin was the second of five children born to Ellis and Muriel Franklin, both members of educated and socially conscious Jewish families that had arrived in England during the 1700s and 1800s. Her father was a merchant banker and Franklin was educated at a private day school at Norland Place in West London, Lindores School for Young Ladies in Sussex, and St Paul's Girls' School, London. Fascinated by physics and chemistry since childhood, Franklin studied the Natural Sciences Tripos at Newnham College, Cambridge, from which she graduated in 1941.

Earning a research fellowship, she joined the University of Cambridge physical chemistry laboratory under Ronald George Wreyford Norrish, who disappointed her by his lack of enthusiasm.

The British Coal Utilisation Research Association (BCURA) offered her a research position in 1942 and she started her work on coals. This helped her earn a PhD in 1945. She went to Paris in 1947 as a post-doctoral researcher under Jacques Mering at the Laboratoire Central des Services Chimiques de l'Etat, where she became an accomplished X-ray crystallographer. She became a research associate at King's College London in 1951 and worked on X-ray diffraction studies, which would eventually facilitate the double helix theory of the DNA. In 1953, after two years, owing to a disagreement with her director John Randall and more so with her colleague Maurice Wilkins, she was compelled to move to Birkbeck College. At Birkbeck, John Desmond Bernal, chair of the physics department, offered her a separate research team. She died in London on 16 April 1958 of ovarian cancer at the age of thirty-seven. She is buried at the Willesden Jewish Cemetery in London.

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