

## Rosalind Franklin

Rosalind Franklin was born in England in 1920, the daughter of a prosperous business man. She was therefore able to get a superior education for young women of the time. She was a brilliant student, with interest and ability in math and science as well as excellent language skills. She spoke four languages with varying degrees of competence from excellent to passable. Rosalind decided when she was 16 that she wanted to pursue a career in science. She received her PhD from Cambridge in 1945.

After WWII, she spent several years working in France where she learned to analyze carbons using x-ray crystallography. On her return to England, she began work at King's College London, using x-ray diffraction studies of large biological molecules. While she was producing amazing diffraction photos of DNA and recognizing the helix structure of the DNA molecule, Watson and Crick were working on developing a theoretical model of DNA at the Cavendish Laboratory at Cambridge.

There was fierce competition among scientists in this field and there was no shortage of discrimination against women as serious scientists. Maurice Wilkins, another scientist at King's College, showed Watson and Crick some of Franklin's work, including the photographs of the DNA helix. While they never told her that they had seen her work, nor acknowledged her contribution to their final model, it is certain that her work provided them with the final pieces to the puzzle which permitted them to publish their findings and to take for themselves all the credit for the discovery of the structure of DNA.

Rosalind Franklin's contribution to the DNA model developed by Watson and Crick had not yet been established or acknowledged when they were awarded the Nobel Prize in 1962. However, even if it had, it was too late for her to have shared in the Nobel Prize. She died in 1958 of ovarian cancer.

She was single-minded in her dedication to science. She wrote to her father during her senior year at Cambridge "You frequently state,...that I have developed a completely one-sided outlook and look at everything and think of everything in terms of science. Obviously my method of thought and reasoning is influenced by scientific training—if that were not so my scientific training will have been a waste and a failure. But you look at science as some sort of demoralizing invention of man, something apart from real life, and which must be cautiously guarded and kept separate from everyday existence. But science and everyday life cannot and should not be separated."

For more: see the book: *Rosalind Franklin: Dark Lady of DNA* by Brenda Maddox