Maurice Wilkins

- Developed the first image of DNA using X-ray diffraction
- Worked with Franklin, Watson, and Crick

Maurice Wilkins was born at Pongaroa, New Zealand, on December 15, 1916. When he was of school age, Wilkins went to England to attend King Edward's School, Birmingham. He earned a degree in physics from St. John's College in Cambridge at the age of 22. He continued his studies at Birmingham University, where he accepted a position as research assistant to Dr. J.T. Randall in the physics department. His Ph.D. research focused on how phosphorescence occurs in solid materials. He used his knowledge of phosphorescence during the war to improve radar screens. He also worked on the Manhattan Project in Berkeley, California. The Manhattan Project was a code word for the secret research team that eventually developed the first atom bomb.

He returned to England after the war and met up again with Professor Randall. Here, his research was diverse, but eventually centered on a project using various technologies to study nucleic acids in cells, including DNA. One of the techniques he used was X-ray diffraction. At the time, many researchers around the globe felt that determining the exact structure of DNA would be key to understanding how reproduction occurs. Wilkins, along with Raymond Gosling, developed the first image of DNA using this technique in 1950. A year later, Rosalind Franklin joined the lab to continue this line of research. Without Franklin's knowledge, Wilkins showed one of her images to James Watson in 1953. At the time, Watson and his colleague, Francis Crick, worked for a competing laboratory. It was Rosalind Franklin's image that helped Watson and Crick determine the correct configuration of the DNA molecule.

For his assistance in the discovery of the double helix structure of DNA, Wilkins received the Nobel Prize along with Watson and Crick in 1962.

Resources

http://www.nzedge.com/heroes/wilkins.html

http://nobelprize.org/medicine/laureates/1962/wilkins-bio.html