Wilkins Hugh Frederick Wilkins Biography

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Biography

Maurice Hugh Frederick Wilkins is a British born physicist known for helping to identify the structure of deoxyribonucleic acid (DNA). He was born on December 15, 1916 in Pongaroa, New Zealand, the son of a physician. Young Wilkins shared his father's interest in the sciences and he was taken to England at age 6 where he studied at the King Edward VI school in Birmingham and later at St. John's College in Cambridge. He graduated in 1938 with a degree in physics and two years later earned his doctorate from the University of Birmingham.

Almost immediately Wilkins went to work for the Ministry of Home Security and Aircraft Production where he used his expertise in physics to develop radar systems. Later, as part of a British team assigned to the Manhattan project, he worked for a time at the University of California to develop the atomic bomb. He soon became disillusioned with nuclear physics and, inspired by Schrödinger's book *What is Life*, Wilkins turned his interest instead to biophysics. He took a position with St. Andrews University in Scotland in 1945. The next year he settled in London working with the Medical Research Council's Biophysics Research Unit at King's College.

While working at King's Wilkins began to study the structure of the DNA molecule which had been identified earlier, in 1946. Using an X-ray diffraction method he exposed crystalline DNA molecules to X-ray beams and then analyzed the pattern formed by the reflected radiation. Using this data, Wilkins determined that the DNA molecule has a double helical structure. One of his fellow researchers, Rosalind Franklin, determined that the phosphate groups of the molecule are located on the outside of the helix. Wilkins passed this information on to Watson and Francis Harry Compton Crick who incorporated the double helix theory into their model of the DNA molecule. In 1962 Wilkins, Watson, and Crick shared the Nobel Prize for Physiology or Medicine for their discovery.

Wilkins became Assistant Director of the Biophysics Research Unit in 1950 and was promoted to Deputy Director in 1955. In 1970 he was appointed to Director, a post he held until 1972. Also in 1970, Wilkins was also appointed Professor of Biophysics and Head of Department at King's College.

Recent Updates

October 5, 2004: Wilkins died on October 5, 2004, in London, England. He was 87.
Source: *New York Times,* www.nytimes.com, October 11, 2004.