



## Max Perutz: Nobel Prize in Chemistry 1962



**Max Perutz**



Max Perutz was born in Vienna, Austria on May 19th, 1914. Both his parents came from families of textile makers that had become rich by introducing mechanical spinning and weaving into the Austrian Monarchy in the 19th century. He went to a grammar school called the Theresianum in Vienna. His parents suggested that he should study law in preparation for entering the family business, but he was inspired to study chemistry by one of his teachers. He easily persuaded his parents to let him follow his own interest.

Max Perutz began studying chemistry at Vienna University in 1932. He did not enjoy some parts of the course, such as inorganic analysis. However, he was very interested in other parts, such as organic chemistry, and especially by organic biochemistry. He decided that he wanted to come to Cambridge to study more organic biochemistry and work for his Ph.D. thesis. He came to the [Cavendish Laboratory](#) in Cambridge to work with John Desmond Bernal in 1936, with financial support from his father. He has stayed working in Cambridge for the rest of his career.

After Hitler's invasion of Austria and Czechoslovakia, Max Perutz's parents became refugees, and his own sources of money were soon exhausted. Fortunately, he was appointed research assistant to [Sir Lawrence Bragg](#) from January 1st, 1939, paid for by the Rockefeller Foundation. His work was interrupted several more times for various reasons during the war. His career became more stable in 1945, when he was given an Imperial Chemical Industries Research Fellowship. Then, in October 1947, he was made head of the newly created Medical Research Council Unit for Molecular Biology. The only other member of staff when the Unit opened was Sir John Kendrew. The Unit is now incorporated in the Medical Research Council's Laboratory of Molecular Biology (LMB) on Hills Road in Cambridge, along with other groups working on similar problems that were previously scattered around Cambridge. In 1962 he was made Chairman of the LMB, which now houses over 400 people.

Max Perutz's interest in organic biochemistry led him to study biological molecules using X-ray diffraction. In 1953, shortly after the discovery of the structure of DNA, he realised that attaching a single large atom (e.g. Mercury) to a molecule would change the X-ray diffraction pattern obtained from the crystal, making it possible to completely solve the structure of that molecule. He and [Sir John Kendrew](#) used this doping technique to discover the structures of haemoglobin and myoglobin. Max Perutz shared the Nobel Prize in Chemistry in 1962 with Sir John Kendrew for this work. He was also made Companion of the British Empire in 1962. Following his "retirement" in 1979 he continued to work at the LMB almost every day. He continued to study haemoglobin to help develop useful drugs for cancer treatments. He also studied other biological molecules to try and help develop treatments for Huntington's disease.

Max Perutz was a keen mountaineer, and his other interests included walking, skiing and gardening. He died of cancer on 6th February 2002.