

Topic Page: [Ochoa, Severo, 1905–1993](https://search.credoreference.com/content/topic/ochoa_severo_1905)

Summary Article: **Ochoa, Severo**

From *The Hutchinson Unabridged Encyclopedia with Atlas and Weather Guide*

Spanish-born US biochemist who was awarded a Nobel Prize for Physiology or Medicine in 1959 for the discovery of enzymes that catalyse the formation of RNA (ribonucleic acid), in 1955, and DNA (deoxyribonucleic acid).

Life Ochoa was born in Luarca, Asturias region, studied at Málaga and Madrid, and obtained a degree in medicine from the University of Madrid in 1929. He lectured at Madrid in the period 1931–35, until the threat of the Spanish Civil War forced him to flee Spain for Germany, where he worked at the University of Heidelberg.

With the rise of Hitler, he fled again in 1937, this time to Britain, where he worked at Oxford University. He moved to the USA in 1940, and worked at Washington University throughout 1941–42, before moving to New York University, first as a research associate in the college of medicine, and then in 1954–75 as a professor in the department of biochemistry. He became a US citizen in 1956. In 1975 he joined the Roche Institute of Molecular Biology.

Ochoa, who counted the artist Salvador Dalí and the poet Federico García Lorca among his friends, was a dedicated world citizen. He was president of the International Union of Biochemistry, and a member of the Soviet Academy of Sciences. He returned to Spain permanently in 1985, where most cities have a street named after him.

Work Ochoa was one of the pioneers in molecular biology and genetic engineering. His early work concerned biochemical pathways in the human body, especially those involving carbon dioxide, but his main research was into nucleic acids and how their nucleotide units are linked, either singly (as in RNA) or to form two helically wound strands (as in DNA). In 1955 Ochoa obtained an enzyme from bacteria that was capable of joining together similar nucleotide units to form a nucleic acid, a type of artificial RNA. Nucleic acids containing exactly similar nucleotide units do not occur naturally, but the method of synthesis used by Ochoa was the same as that employed by a living cell.

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