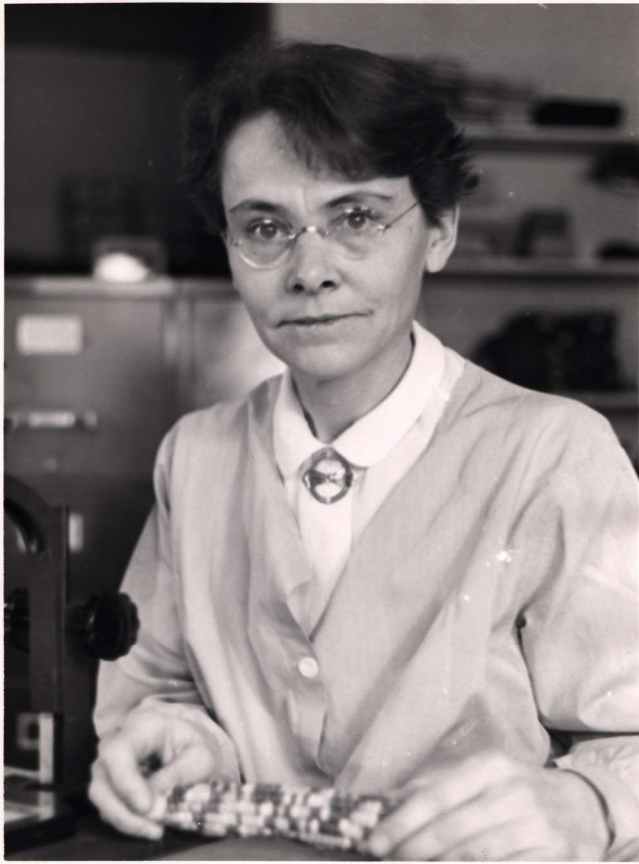


Barbara McClintock

(1902 - 1992)

Discovered Jumping Genes



Barbara McClintock grew up in a poor family in Connecticut and New York but was supported by her father to study at Cornell University, receiving her PhD in botany in 1927. At Cornell she studied corn genetics, a subject to which she would devote her professional life. McClintock was able to develop a method for studying changes in chromosomes during reproduction, demonstrating such fundamental ideas as recombination during meiosis, ring chromosomes, and the roles of the centromere and telomeres. She also developed the first genetic map for corn, linking different regions of the chromosome to the physical traits of the plant.

But it was McClintock's work in the late 1940s that truly challenged existing ideas about how genes worked. Decades of genetic mapping showed that the position of genes on chromosomes was fixed. McClintock, however found that genetic elements can sometimes change position on a chromosome, and that this causes nearby genes to become active or inactive. These mobile or "jumping" genes later became known as transposons. The implications of McClintock's work took decades to be widely accepted.

McClintock remained active in science and the scientific community well after she retired from active research. She remained at Cold Spring Harbor as a Distinguished Service Member of the Carnegie Institution of Washington and attended the annual Cold Spring Harbor Symposia and seminars until she died at age 90 in 1992.

In 1983, 35 years after her first published report of transposition, McClintock was awarded the Nobel Prize for Physiology or Medicine,

Main image: McClintock in a Cold Spring Harbour laboratory, 1947. [The Barbara McClintock Papers, U.S. National Library of Medicine].
Background: Maize Growing in a field in New Road. [Adrian Cable, CC BY-SA 2.0].

