Nettie Stevens

(1861 - 1912)

Discovered Sex Chromosomes

Main image: Nettie Stevens, 1903. [Bryn Mawr College Special Collections].
Background: Studies In Spermatogenesis,1906. [Nettie Maria Stevens, Carnegie Institution].

Nettie Stevens trained as a high school teacher and librarian, enrolling at Leland Stanford University at the relatively advanced age of 35. A brilliant student, Stevens had broad interests in biology, including zoology, cytology, embryology and genetics and made substantial contributions to all of these fields. Her most significant contribution however, was to the field of chromosomal heredity – how sex is determined.

While studying the fertilization process of the mealworm, Stevens realised that chromosomes always existed in pairs and found that while male worms made reproductive cells with chromosomes of two types, female worms made reproductive cells with only one type. She concluded that sex is inherited as a chromosomal factor and that it is the males who determine the sex of their offspring - via the chromosome she named "Y". Stevens' work titled *Studies in Spermatogenesis*, was published as a Carnegie Institute report in 1905.

Stevens' idea ran counter to the perceived wisdom of the time, that sex was determined by the mother and/or other environmental factors. A second researcher, Edmund Beecher Wilson, was conducting similar research at Columbia University, and had read Stevens' work before publishing his own findings. Stevens is now credited with having made a larger conceptual breakthrough.

Stevens died of breast cancer just 9 years after gaining her PhD.

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