

Mendel's Life and His Contribution

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Gregor Mendel was an Austrian monk who discovered the fundamental principles of heredity in his garden. Mendel's insights created the cornerstone of contemporary genetics and the study of heredity, and he is widely regarded as a genetics pioneer.

Following his graduation, Mendel participated in a two-year programme at the University of Olmütz's Philosophical Institute. There, he excelled academically, notably in physics and math's, and tutored in his spare time to supplement his income. Despite suffering from severe depression, which prompted him to abandon his studies several times, Mendel graduated from the programme in 1843.



Experiments and Theories:

Mendel began studying the transfer of genetic traits in plant hybrids around 1854. At the time of Mendel's research, it was widely considered that the hereditary qualities of any species' offspring were just a diluted blending of whatever traits were present in the parents. It was also widely assumed that, over generations, a hybrid would revert to its original form, implying that a hybrid could not develop new forms. However, the results of such investigations were frequently biased by the comparatively short time span over which the tests were done, whereas Mendel's research lasted up to eight years and encompassed tens of thousands of different plans.

Mendel picked peas for his studies because of their many unique variations and the ease with which progeny could be generated. He cross-pollinated pea plants with clearly opposing characteristics—tall with short, smooth with wrinkled, green seeds with yellow seeds, and so on—and, after analysing his results, reached two of his most important



conclusions: the Law of Segregation, which established that there are dominant and recessive traits passed on randomly from parents to offspring (and provided an alternative to blending inheritance, the dominant theory of the time), and the Law of Inheritance, which established that

He also proposed that this heredity followed basic statistical laws. Though Mendel's experiments had been conducted with pea plants, he proposed that all living things had such traits.

Mendel gave two talks on his findings to the Natural Science Society in Brno in 1865, and the results of his research were published the following year in their magazine, *Experiments on Plant Hybrids*. On the other hand, Mendel did nothing to promote his work, and the scant references from the time period revealed that most of it had been misconstrued. It was widely assumed that Mendel had just demonstrated what was already widely known at the time: hybrids gradually reverted to their original form. Variability's significance and evolutionary consequences were generally disregarded. Furthermore, Mendel's discoveries were not widely accepted, even by Mendel, who reasoned that they only related to specific species or features. Of course, his system eventually proved to be of general application and is one of the foundational principles of biology.