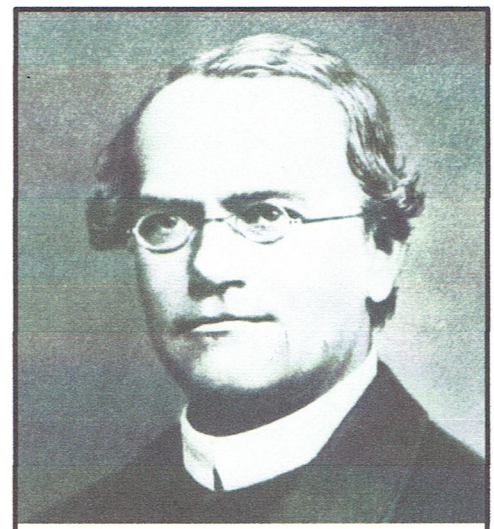
GREGOR MENDEL

(1) I was a priest, I loved gardening and I failed twice at the exams I needed to pass in order to become a high school teacher. You might be surprised that you're reading about someone like me, but believe me, no one is more surprised than I am! I certainly never expected to be remembered, let alone studied by millions of students all over the world after my death. If you're wondering how I came to be known as the "Father of Modern Genetics", I will tell you a brief story of my life and about the research that made me so famous.



Gregor Mendel
Botanist, Scientist (1822-1884)

(2) I was born Johann Mendel on July 20th, 1822 in a small village in the Austrian Empire called Heinzendorf bei Odrau. It wasn't until I became a monk that I was called Gregor. There wasn't much money growing up because my parents were poor farmers, but they made many financial sacrifices to make sure that I could go to school. I succeeded in my high school studies and earned admission into Olomouc University in 1840 at the age of 18. There I studied physics, mathematics and philosophy. I excelled in my studies, but I suffered from a few deep bouts of depression that set me back. As well, my studies weren't cheap and I came into financial difficulties two years into my studies. My kind younger sister Theresia gave me her dowry to help support my studies. Even that wasn't enough to pay for the fees. One of my professors told me that if I became a monk, I could continue my studies in science at the Monastery of St. Thomas and it would be free. This might surprise you all, but I never wanted to be a monk! All I wanted to do was study science but for someone from a poor family, becoming a monk seemed like the only solution to continuing studying, so I did it.

(3) When I began my religious training I was renamed Gregor, and that's why you all know me as Gregor Mendel. In 1847 I officially became a monk and was given my own parish a year later. I really didn't enjoy being a parish priest and it was making me really unhappy and ill so I was sent to do a different job. I was positioned as a high school teacher, even though I didn't have the official qualifications. In 1850, at the age of 28, I decided to take the exams needed to become a certified high school teacher. Everything went well until I failed the oral part of the exam which was a great disappointment. Thankfully, even after my failure, Abbot Napp of the monastery decided to sponsor me to study at the University of Vienna. Here I was exposed to a lot of the teachings that would add to my interest in studying heredity. At the University I studied physics under Christian Doppler (of the Doppler Effect fame) as well as botany under Franz Unger, who had begun using this amazing device called a microscope.

(4) In 1854 I eventually returned to the monastery after my studies. Again I was put in the position of teaching and took an official exam to become certified. To my shame I failed the oral part again, but I was quite ill at the time. Even without the certification (which I didn't bother to try for again) I taught at the monastery for over 10 years. It was during this time, between 1856 and 1863, that my studies on hereditary and inheritance took place.

(5) Abbot Napp gave me 2 hectares of monastery land to conduct my experiments. At first I started with mice, but the Abbott thought it wasn't decent to study animal sex, so I chose to focus my studies on pea plants. They turned out to be the perfect subject because they were easy to grow, easy to pollinate and quickly produced many offspring. I decided to study seven traits of the pea plant but my main focus was on seed shape which came in two forms: either smooth or wrinkled. For the next several years I became a gardening fanatic and grew over 28 000 plants. My results were very exciting. When a round

© Tangstar Science

GREGOR MENDEL

parent was bred with a wrinkled parent, all of their hybrid offspring turned out round. This told me that the round factor was somehow "dominant" over the wrinkled factor because it expressed itself while masking the wrinkled factor which I considered "recessive". As well, when I took the hybrid round offspring and bred them as parents for the next generation, they produced round offspring, but to my amazement, they also made wrinkled offspring. This meant that somehow, even though the hybrid parents looked round, they still somehow silently carried within them the recessive wrinkled factor. Even more amazing, the ratio of round and wrinkled offspring produced from the hybrid round parents was always the same. The ratio was always 3 round to 1 wrinkled offspring. I did this experiment thousands of times with the same results!

(6) These findings, along with others, helped me create what are now known as my "Mendel's Laws of Inheritance": The Law of Segregation, the Law of Dominance and the Law of Independent Assortment. I happily published my research findings in 1866. To my sadness my work was rejected and not given much thought by the scientific community until after my death. From 1866 onwards, I focused on my responsibilities at the monastery and gave up scientific research. But since you're reading about me now, you must suspect that someone eventually rediscovered my research. The importance of my work became undeniable as more and more scientists began duplicating my findings in the 1900s. This helped create a new field of research called genetics. Not such a bad end for a poor village boy with a tendency to fail oral exams!

© Tangstar Science