

Thursday, March 8th, is International Women's Day—a day to celebrate the social, economic, cultural, and political achievement of women. To celebrate this day, we wanted to highlight female scientists from around the world and their achievements.

Even though women have come a long way—making up half of the total U.S. college-educated workforce—only 29% of the science and engineering workforce is women. According to the NSF, Science & Engineering Indicators, 2016, female scientists and engineers concentrate in different occupations compared to men, with relatively high shares of women in social sciences, biological, agricultural, and environmental life sciences. Women represent only 15% of the engineering workforce and 25% in computer and mathematical sciences.

There are now more resources and programs aiding girls to become interested, as well as succeed, in the science and engineering workforce. So, we can't help but look back at the women who have paved the way for young girls everywhere.

Marie Curie

Marie Curie is arguably one of the most influential female scientists—and for good reason! Curie was the first woman to win a Nobel Prize in any category and remains the *only person* in history to win Nobel Prizes in two different scientific categories.

Educated in secret in her formative years, Curie didn't receive a "proper" education till she moved to Paris. There she met her husband, physicist Pierre Curie. The duo collaborated on their famous radioactivity of uranium work, which won them the 1903 Nobel Prize in Physics.

Marie was later awarded the Nobel Prize in Chemistry in 1911 for the discovery of radium

and polonium.

Irène Joliot-Curie

Daughter of the famous Marie and Pierre Curie, Irène followed in her parents' footsteps working with her husband to artificially create new radioactive elements. The couple was jointly awarded the Nobel Prize in Chemistry in 1935.

Rosalind Franklin

One of Franklin's most significant contributions to science was using a technique called x-ray crystallography to take the very first picture of DNA. This advancement helped resolve the 3-D structure of DNA in 1953, which was one of the biggest mysteries in biology at the time.

Not only did she help the world of science, but helped refugees during WWII who were fleeing the Nazis. Since she was an exceptionally bright student, she had earned several scholarships, but instead of attending school, she passed the money along to the Jewish refugees to help them survive.

Jocelyn Bell Burnell

While at the University of Cambridge in 1967, Bell was conducting her graduate work with a radio telescope. One-day, Burnell noticed an anomaly in the signal—discovering the first pulsar, a neutron star that spins incredibly fast. This discovery won the Nobel Prize in Physics in 1974, however Burnell was not recognized. Her contributions were vastly overlooked and her advisor and a colleague were praised.

Burnell didn't let this stop her from continuing to make great strides throughout her career.

Ada Lovelace

Showing talent for math and science at an early age, Lovelace was able to receive one of the best educations a girl of the early 19th century could get.

This allowed her to work with inventor Charles Babbage, who was designing a machine capable of making calculations on its own. She offered insight into making the machine better, by enabling it to process equations that were quite complex.

Her contribution is widely regarded as the first computer program. Her legacy lives on today with Ada Lovelace Day (ALD), a day to celebrate her story and encourage girls to pursue STEM fields. This year's ALD will take place October 9th, 2018.

Lise Meitner

Since girls were not allowed to receive formal education in Vienna, Meitner received private tutoring. However, that didn't stop her from becoming the first woman to receive a Ph.D. from the University of Vienna.

She went on to work unpaid for the famous physicist, Max Planck. Even though she didn't make any money, the experience allowed her to go on to become the first female physics professor in Germany. Sadly, the rise of the Nazi party forced her to leave her job and immigrate to the Netherlands.

The Nobel Prize in Chemistry went to her longtime collaborator, Otto Hahn in 1944, while her large contributions to the work were overlooked. However, Meitner's scientific contributions were finally immortalized with element 109—Meitnerium, which was discovered and named after her death.

Rita Levi-Montalcini

Rita's father did not approve of women getting an education, however, she went on to earn a medical degree from the University of Turin Medical School despite his wishes.

After not being able to find medical research work due to anti-Jewish laws dictated by Benito Mussolini, However, Rita kept pushing forward in pursuing her dreams. She continued her research throughout WWII from a lab she built in her bedroom until she immigrated to the U.S. in the 1950s to a proper lab.

Rita went on to discover Nerve Growth Factor, a protein-like molecule that grows and maintains neuron health in the brain. This work earned her the Nobel Prize in 1986. Rita died in 2012 at the age of 103, leaving behind an extraordinary legacy.

Barbara McClintock

Barbara McClintock pursued an education in botany and genetics at Cornell after the encouragement of her father.

McClintock went on to discover certain sequences of DNA that can change locations within the gene. When this happens, it can affect how the gene is expressed. They are often referred to as "jumping genes" or "transposable elements". While some of these mutations are harmless, others are responsible for diseases like breast cancer.

McClintock became the first woman in 1983 to be awarded an unshared Nobel Prize in Physiology or Medicine, a record she still holds today.

All these women displayed that hard work and perseverance enables a person to not let anything or anyone stop them from pursuing dreams. They teach us to never let anything stop you going for what you love and believe in!

Happy International Women's Day!

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Summary



Article Name

International Women's Day- Celebrating Women in Science

Description

March 8th celebrates women around the world with International Women's Day. To acknowledge the day we wanted to highlight trail blazing women in science.