



Women's History Month



The New York Public Library, Science, Industry and Business Library honors women whose scientific and technical expertise have helped to make us healthy, wealthy and wise.

Randice-Lisa Altschul (1999). In 1999, Ms. Altschul, a New Jersey toy designer, patented the world's first disposable cell phone which she trademarked as the Phone-Card-Phone™.

Mary Anderson (1859 - 1940). In 1905, while riding a New York City streetcar during a snowstorm, Anderson conceived the idea for the windshield wiper, which she later patented. In 1919 the invention became standard for all motor vehicles.

Ada Byron, Lady Lovelace (1815 - 1852). Known as the "mother of software" Ada Byron, the daughter of Lord Byron, corresponded frequently with Charles Babbage, the acknowledged inventor of the first computing machine. In 1843 Lady Lovelace proposed to Mr. Babbage a plan for processing numbers that is regarded as the precursor of computer programming. The U.S. Department of Defense named one of its programs ADA in her honor.

Madame Marie Curie (1867 - 1934). Along with her husband Pierre, Madame Curie discovered the elements Radium and Polonium, which became the basis for X-ray technology. Marie Curie is the only woman to be awarded two Nobel Prizes.

Gertrude Belle Elion (1918 - 1999). A native New York City resident and graduate of Hunter College, Dr. Elion synthesized and patented the drug *6-mercaptopurine*, which was first used to fight leukemia and is now under the name *Lonuran*, a critical component in organ transplant surgery. In 1988 Dr. Elion shared the Nobel Prize in medicine.

Rosalind Franklin (1920 - 1958). By using X-ray crystallography, Dr. Franklin first postulated that DNA had a helical structure. While endeavoring to gather more evidence to prove this theory, her work was introduced publicly at a seminar and was incorporated by James Watson and Francis Crick in 1953 in their seminal paper in *Nature* describing the structure of DNA. Tragically, she died in 1958 four years before the Nobel Prize was awarded for this discovery. Unfortunately the Nobel Prize is not awarded posthumously.

Lillian Moller Gilbreth (1878 - 1972). With her husband Frank Ms. Gilbreth developed a merged concept of psychology and management, which is commonly referred to as "time and motion study." The book and film *Cheaper by the Dozen* are based on the lives of the Gilbreths and their 12 children.

Ruth Handler (1917 - 2002). In 1959 at the New York Toy Fair Mattel introduced "Barbie" the iconic American doll designed by Ruth Handler, wife of Mattel's founder Elliot Mattel.

Mary Kies (18th – 19th century). A process for weaving silk and straw to produce women's hats was the basis in 1809 for the first United States patent issued to a woman.

Stephanie Kwolek (1923 -). In 1965, while a chemist at DuPont, she invented Kevlar™, which has saved the lives of thousands law enforcement officers and soldiers over the years. While she never made any money from sales since employees sign over their rights to the company, she has been compensated by the fact that her invention has had such an impact on the world. She was awarded the National Medal of Technology by President Clinton in 1996.

Hedy Lamarr (1914 - 2000). The "most beautiful woman in the world" --according to MGM where she was a star -- was awarded a United States Patent, No. 2,292,387 in 1942. The patent was for a secret communication system useful for submarine guidance.

Sybilla Masters (d. 1720). In 1715 Sybilla Masters became the first woman to be granted a British patent. An American colonist Ms. Masters was forced to register the patent under her deceased husband's name because patent rights were denied to women and minorities. The process she invented permitted the milling of Indian corn for a wide variety of purposes.

Barbara McClintock (1902 - 1992). While researching the genetic traits of maize, this American cytogeneticist and ethnobiologist discovered the phenomenon of "jumping genes" which was not accepted by the scientific community for many years. Finally in 1983 she was awarded the Nobel Prize in Physiology or Medicine. She was the first woman to be awarded an unshared Nobel Prize.

Ann Tsukamoto (1965 -). Current stem cell research is based on the process co-patented in 1991 by Dr. Tsukamoto that permits the isolation of the human stem cell.

This is just a brief list of accomplished women scientists. Here are some suggested sources for further research:

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*R-SIBL Q130.J68

Notable Women Scientists. Pamela Proffitt. Gale Group, 1999.

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Women in Science: Career Processes and Outcomes. Yu Xie and Kimberlee A. Shauman. Harvard University Press, 2003.

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Online McGraw-Hill Encyclopedia of Science

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Search our online catalogs, LEO and CATNYP, for individual biographies under proper names. For collective biographies, try the following subject headings:

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