

The ASBMB celebrates Women in STEM

2021



Katalin Karikó wins the Lewis S. Rosenstiel Award for Distinguished Work in Basic Medical Research with Drew Weissman for their groundbreaking research on mRNA, culminating in the development of vaccines against SARS-CoV-2.

2020



Jennifer Doudna and Emmanuelle Charpentier win the Nobel Prize in chemistry for their pioneering work on gene editing with CRISPR.



Kizzmekia Corbett leads the development of the Moderna vaccine for SARS-CoV-2 at the National Institute of Allergy and Infectious Diseases.

2019



Clarice Phelps is featured on the International Union of Pure and Applied Chemistry's Periodic Table of Younger Chemists. She is the first Black woman credited for helping discover an element, tennessine.

2018



Frances Arnold wins the Nobel Prize in chemistry for her pioneering work on directed evolution to engineer enzymes.

2015



Tu Youyou wins the Nobel Prize in physiology or medicine for her discovery of the malaria-inhibiting substance artemisinin.

2014



May-Britt Moser wins the Nobel Prize in physiology or medicine with her husband, Edvard Moser, for their work on grid cells.

2009



Ada Yonath wins a shared Nobel Prize in chemistry with Venkatraman Ramakrishnan and Thomas Steitz for studies on the structure and function of the ribosome.



Elizabeth Blackburn and Carol Greider win the Nobel Prize in physiology or medicine with Jack Szostak for discovering the enzyme telomerase, which protects chromosomal degradation.

2008



Françoise Barré-Sinoussi wins the Nobel Prize in physiology or medicine with Luc Montagnier for the identification of HIV as the cause of AIDS.

2004



Linda Buck and Richard Axel win the Nobel Prize in physiology or medicine for their role in elucidating the olfactory system.

2002



Peggy Whitson, a biochemist, becomes the first resident scientist aboard the International Space Station and is named NASA's first ISS science officer.

1996



Shannon Lucid, a biochemist, spends 188 days in space conducting life science experiments.

1988



Gertrude Elion wins the Nobel Prize in physiology or medicine for her work on rational drug design. Her discoveries led to the development of the drug AZT for treating HIV.

1986



Rita Levi-Montalcini and Stanley Cohen win the Nobel Prize in physiology or medicine for their discovery of nerve growth factor.

1983



Barbara McClintock wins the Nobel Prize in Physiology or Medicine for her discovery of "jumping genes," known as transposons, that change positions on a chromosome.

1982



Flossie Wong-Staal becomes chief of the Section of Molecular Genetics of Hematopoietic Cells at the National Institutes of Health. She later was part of the team that first cloned HIV.

1978



Lydia Villa-Komaroff, the third Mexican-American woman in the U.S. to earn a doctorate, is the first author on a report showing that bacteria can be induced to make proinsulin.

1974



Susan Leeman discovers the peptide neurotensin. Prior to that, she characterized the peptide known as substance P. In 1991, she was the first woman elected to the National Academy of Sciences in physiology and pharmacology.

1972



Thressa Stadtman begins researching the biological role of selenium, leading to the discovery of selenocysteine as the 21st amino acid.

1971



Helen Berman co-founds the Protein Data Bank. She later takes on leadership roles in establishing the Nucleic Acid Database.

1964



Dorothy Hodgkin wins the Nobel Prize in chemistry for determining the structure of biomolecules, like penicillin and vitamin B12, by X-ray crystallography. Her team solved the structure of insulin in 1969.

1958



Ruth Rogan Benenito discovers a process to produce wrinkle-free, stain-free and flame-resistant cotton fabrics. She is credited with saving the cotton industry in post-WWII America.

1952



Martha Chase demonstrates, with Alfred Hershey, that DNA is the genetic material of life in the classic Hershey-Chase experiment.

1951



Rosalind Franklin begins work on solving the structure of DNA through X-ray crystallography. Her unpublished data were used by James Watson and Francis Crick to develop their double-helix model of DNA.

1947



Marie Maynard Daly becomes the first Black woman to earn a doctorate in chemistry, making contributions to the study of protein synthesis, histone chemistry and the relationship between cholesterol and hypertension.



Gerty Cori, along with her husband Carl Cori, wins the Nobel Prize in physiology or medicine for the discovery of the glycogen metabolism pathway now known as the Cori cycle.

1946



Isabella Karle begins her research at the Naval Research Laboratory in crystallography. She invented practical applications to prove that the theoretical "direct methods" developed by her husband, Jerome Karle, could analyze the structure of crystals.



Jane Wright demonstrates that the drug methotrexate kills tumor cells, forming the basis for modern chemotherapy and reducing the use of radiation. In 1971, she became the first woman president of the New York Cancer Society.

1933



Ruth Ella Moore earns a Ph.D. in bacteriology, making her the first Black woman in the U.S. to earn a doctorate in a natural science. She went on to publish work on tuberculosis, dental caries and blood typing.

1918



Mary Stark is the first to publish support for the presence of heritable tumors in *Drosophila melanogaster*. Because of her work, fruit flies become an invaluable model organism for genetics, including in cancer research.

1915



Alice Ball is hired as the first woman chemistry instructor at University of Hawaii. Ball developed the most effective leprosy treatment at the time using chaulmoogra oil.

1912



Maud Menten and Leonor Michaelis publish their work on how reaction rate is affected by enzyme and substrate concentrations. This relationship is known as the Michaelis-Menten equation.

1910



Abbie Lathrop begins developing inbred mouse strains, including Black 6 mice, the most commonly used strain of lab mouse.

1908



Alice Hamilton publishes her first paper on industrial medicine. She is credited with transforming the health of industry workers in the U.S. and abroad, especially those poisoned by metals.



Mary Engle Pennington becomes chief of the USDA's Food Research Lab. Her research on sanitary methods for perishable food led to the first standards for milk safety and refrigeration of other food products.

1903



Marie Curie wins a shared Nobel Prize in physics for the discovery of radioactivity. She then goes on to win a Nobel Prize in chemistry in 1911 for her discoveries of the radioactive elements radium and polonium.

1886



Rachel Holloway Lloyd earns a Ph.D. from the University of Zurich, making her the first American woman to earn a doctorate in chemistry.

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