

HISPANIC HERITAGE SCIENTIST SHOWCASE



Ynés Mexía

1870–1938

First Female Mexican American Botanist



Background

Ynés Mexía was raised by her mother in Mexía, Texas, a town named for her paternal grandfather. She attended boarding schools in Philadelphia and Ontario before moving to Mexico in 1887 to live with her father. In her late 30s, her mental health declined, and she moved to San Francisco to seek treatment.

Career in Botany

After gaining interest in California's wildlife on nature walks led by the Sierra Club, Mexía began exploring botany at the age of 51, breaking age and gender barriers in the field. In 1922, she joined an expedition led by paleontologist E.L. Furlong. On her first collection trip to Mexico in 1925, the start of her professional career, she collected over 1,500 specimens, including *Mimosa mexíae*—the first of more than 50 plants eventually named after her.

During her career, Mexía traveled the Americas from one end to the other. In 1928, she went to Alaska and collected specimens in Denali National Park with the help of sled dogs. She also spent years travelling along the Amazon River in South America and collected tens of thousands of specimens. Although she never completed her bachelor's degree, she was highly regarded as a botany expert.

Historical Context: Wealth & Privilege

Mexía's botanical career relied on her inherited wealth, which allowed her to break societal rules for women, like travelling alone, wearing pants, and working outdoors. As the daughter of a diplomat, her privileged upbringing also contributed to certain prejudices, especially towards Indigenous groups in Central and South America. Although she spent a few months with the Araguaruna people in Peru during her research and valued their knowledge of the land, stereotypes common in this period are evident in her writing.

Today, she would be a multi-millionaire. In her will, Mexía left the equivalent of more than \$1 million to various environmental organizations, including the California Academy of Sciences.



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Carlos Sueldo, MD

1947–

Doctor of Obstetrics
& Gynecology



Background

Born and raised in Buenos Aires, Argentina, Dr. Carlos Sueldo graduated from the University of Buenos Aires with his medical degree in 1970. He then relocated to the United States to continue studying obstetrics and gynecology at the Chicago Medical School, completing his internship in 1972, and his residency in 1976.

Career in Medicine

Dr. Sueldo was a leading researcher in the development of a new technique for diagnosing infertility—virtual hysterosalpingography, or the injection of dye into the uterus. This allows the reproductive organs to be mapped out with CT scans. The technique is less invasive than traditional procedures like hysterolaparoscopy, which involves surgery that can present higher risk, especially in developing countries with limited medical resources.

As a founding board member of the World Endometriosis Research Foundation, Dr. Sueldo has dedicated much of his research to studying endometriosis* and other conditions affecting endometrial tissue (uterine lining) and fertility. He currently works alongside his daughter, Dr. Carolina Sueldo, at the Women's Specialty & Fertility Center, which he opened in 1984. He is also involved in several clinics and societies focused on reproductive medicine in both the US and Argentina.

** Endometriosis is a condition that affects 5–10% of women, and up to 50% of women dealing with infertility.*

Historical Context: Reproductive Rights

Reproductive rights are rights and freedoms associated with fertility, pregnancy, and other reproductive health and care. Sometimes, political debate about these rights can be complicated and controversial—both in the US and in places like Argentina. Medical professionals like Dr. Sueldo must navigate these differing opinions as well as evolving governmental policies to conduct research and provide reproductive care. As policies and opinions shift, advocates for women's health and reproductive safety from all backgrounds are more important than ever.



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Carolina Alarco

1969–

**Biotech Advisor &
Founder of
Latinos in Bio**



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Background

Born and raised in Lima, Peru's capital city, Carolina Alarco worked in sales for a pharmaceutical company before moving to Boston at the age of 26 to continue her studies at Harvard University. While studying at Harvard, Alarco began working with a company called Genzyme, a biotech company developing treatment for Gaucher disease.

Career in Biotech

Alarco currently runs the consulting firm Bio Strategy Advisors and works closely with biotech startups to assist them in sourcing investors and laying strong foundations that will accommodate future expansion. She supports diversity in STEM by providing guidance to a wide variety of startups, including those with non-traditional origins. One of the projects she's supported is based in Argentina and working toward developing DNA & RNA-based therapeutics; another is an app created by a teacher and caregiver that provides a virtual video mailbox of support for patients, their families, and caregivers.

One of Alarco's most visibly impactful projects is Latinos in Bio, a non-profit dedicated to cultivating and promoting Latinx talent in the biotechnology and life science fields. Founded in 2019 and incorporated two years later, Latinos in Bio hosts annual events and offers formal training courses and mentorship to its members. One of the organization's primary goals is to increase the percentage of Latinos working in STEM as executives and board members, not just in entry-level roles.

Historical Context: Gender Inequality

In 1955, Peru became one of the last South American countries to give women the right to vote. Although progress has certainly been made, there are still significant gaps between boys' and girls' education and literacy in this region today. In rural areas, this gap is even larger, as students must travel long distances that may be unsafe for unchaperoned young girls. Cultural perceptions also make it more difficult for girls to stay in school after they reach puberty.

HISPANIC HERITAGE SCIENTIST SHOWCASE



Sabrina Gonzalez Pasterski, PhD

1993–

Theoretical Physicist



Background

Sabrina Gonzalez Pasterski, a proud first-generation Cuban American, was raised in Chicago, Illinois, where she attended the Illinois Mathematics & Science Academy. As a teen, she flew a single-engine aircraft that she built herself. During her sophomore year at MIT, Pasterski was a part of the Compact Muon Solenoid (CMS) experiment, a particle physics detector built into the particle collider at CERN.

Career in Physics

Pasterski's first breakthrough occurred as a graduate student at Harvard while researching gravitational memory effects, or the predictable changes in position of objects in space due to gravitational waves. Her findings, called spin memory effect, involve the detection and verification of the effects of gravitational waves. She also represents one third of the Pasterski–Strominger–Zhiboedov (PSZ) triangle, a set of relationships between three theories (theory of relativity, quantum field theory, and quantum gravity) and their behaviors.

She is very active in promoting STEM education for girls around the globe and has received recognition for her efforts to bring STEM education to girls in Russia as well as Cuba. She also worked with programs like Michelle Obama's *Let Girls Learn*.

Historical Context: Educational Investment

As one of the nation's largest metropolitan areas, Chicago offers several competitive options for advanced students within its public-school system. Educational systems in both the U.S. and Cuba struggle to retain teachers and reach students in rural areas, which leads many to rely on private educational opportunities that charge tuition; this only heightens socioeconomic-based disparities in academic success. As countries continue to face these challenges, advocates for affordable educational programs like Dr. Pasterski, especially those serving historically underrepresented groups, are incredibly important.



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