



### Description

The ways of the world are Queer!

And yet we are doubtful to embrace Queer! Oh, How Queer!

Despite the challenges that may have poured upon the LGBTQ+ community, scientists have held their heads high leaving a prominent mark on the STEM landscape. Historically, many scientists from the LGBTQ+ in STEM hid their gender or sexual orientation to avoid persecution and punishment. Although late, the sun did shine and they started being known for their caliber in academia and scientific research. Breaking the social norms, the LGBTQ+ community graced the STEM field with eminent scientists and their contributions to society.

As we commemorate the Pride Month, let us remember a few incredible scientists who are remembered for their scientific research and activism. Let's know more about these important LGBTQ+ scientists and their impact on research.

## **LGBTQ+ Scientists in STEM**

# Alan Turing (1912-1954) – The Computer Guy!

Homosexuality was a crime in mid-century England and Alan Turing's story belongs to this time period. It is one of the well-known stories in the history of LGBTQ+ scientists. His first true alma mater was King's College, Cambridge University. Turing studied Mathematics with distinction and engaged himself in the mastery of the German enciphering machine, Enigma, and other cryptological investigations.

Turing was more focused on learning the comparison between the power of computation and that of the human brain. It founded the "Artificial Intelligence" program of coming decades. However, while working on the mathematical theory of biological morphogenesis, Alan Turing was arrested for indecency in 1952, pled guilty, and was punished via hormone injections. He died on 7<sup>th</sup> June 1954 by suicide.

Even today, he is known for his famous paper on "Computing Machinery and Intelligence", published in



1950. In 2013, the British government granted a posthumous pardon to this computing genius.

### Sara Josephine Baker (1873-1945) – A Notable Physician

Doctor Jo was the first director of New York's Bureau of Child Hygiene and a pioneer in public-health. In 1917, she became the first woman to earn a doctorate in public health from the New York University. She played an instrumental role in identifying "Typhoid Mary" — a house help in New York known for spreading a small Typhoid epidemic in the city.

As suggested, Baker always liked women better than men and had a masculine attitude in life. She happily lived with her roommates all her life and lived an altogether satisfactory life. She supported the idea of "free-thinking and free-spirited women".

### Alan Hart (1890–1962) – First Transgender Public Health Expert

Alan Hart was the Yale trained public health expert and researcher. He became a famous figure in the fight against tuberculosis, which at that time was the leading cause of death in the United States. Also, he was one of the first female-to-male transgender people in the US to undergo a hysterectomy and live the remainder of his life as a male. Hart served as the director of hospitalization and rehabilitation at the Connecticut State Tuberculosis Commission until his death.

### Sally Ride (1951-2012) – First American Woman in Space

On 18<sup>th</sup> June 1983, Sally Ride became the first American woman in space, flying aboard the space shuttle Challenger. Later, she became the director of the California Space Institute at the University of California, San Diego, and started a non-profit company — Sally Ride Science, in 2010 to inspire students to pursue their interest in science and math. She founded the company with her partner and close friend.

However, out of the fear of not getting sponsors, they kept their relationship away from the public. Furthermore, shortly before Ride's death due to pancreatic cancer, Ride opened up about her partner. Ride was with her partner for 27 years, more like friends and founders of Sally Ride Science, only aiming towards creating awareness of science and math among children and promoting STEM.

## Ruth Gates (1962–2018) – A Pioneer in Saving Coral Reefs

Ruth Gates was renowned for her brilliance as a marine scientist and her charm and infectious bright personality. Dr. Gates played a major role in understanding coral reef ecosystems and educating the public about the threat climate change places on the oceanic wonders. Her life's mission was to help save coral reefs by deliberately breeding "super corals" — reefs that can withstand high sea temperature.

Gates was openly gay and married her wife in 2018, shortly before her death. She was diagnosed with brain cancer and died due to complications during surgery. Meanwhile, Gates's tactics of saving the coral reefs are still being implemented to strengthen the coral reefs worldwide.



#### Ben Barres (1954–2017) – First Openly Transgender Neurobiologist

Ben Barres was a prominent neurobiologist at Stanford University. He extensively worked on a type of brain cell called glia. This revolutionized the understanding of the brain for the scientific research community. In 2013, Dr. Barres became the first openly transgender member elected to the US National Academy of Sciences.

Barres became a hero for people from gender and sexual minorities (LGBTQ+), and for early-career scientists generally. In 2017, Barres died of cancer at the age of 63, leaving behind a posthumously published memoir, *The Autobiography of a Transgender Scientist*.

#### **Lauren Esposito – Co-Founder of 500 Queer Scientists**

Lauren Esposito is an arachnologist (a scientist who studies spiders and related animals such as scorpions) and the only woman expert on scorpions in the world. She is the co-founder of 500 Queer Scientists, a visibility movement and professional network that boosts the recognition and awareness of LGBTQ+ in STEM fields.

### Sophie Wilson (1957–Present) – Creator of Programming Architecture

Sophie Wilson was a British computer scientist, known for designing of the Acorn Micro-computer and creator of the programming architecture for the original ARM chip. Wilson transitioned from male to female in 1994 and went on to work for semiconductor manufacturer Broadcom whose system chip was the main component of the Raspberry Pi computer.

## Nergis Mavalvala (1968-Present) - First Woman Dean of MIT

Nergis Mavalvala is the dean of MIT's School of Science and an earlier professor of physics, who specialized in Astrophysics. Her research focuses on the detection of gravitational waves and quantum measurement science. She is the first woman to take charge as the dean of the School of Science.

Mavalvala describes herself as a queer person of color and stated that she had no clue about her sexual orientation in her early twenties. Today, Mavalvala believes that "Anybody should be able to succeed — whether you are a woman, a religious minority or gay. It just doesn't matter."

Queer scientists such as Leonardo da Vinci, Sir Francis Bacon, and Angela Clayton, and the list is by no means exhaustive, have created some marvelous milestones in STEM disciplines. With the world becoming a better place for Queers, their contribution to STEM is increasing and creating a harmonious environment of support and growth.

Science and research are not entitled to gender, and knowledge is for all. From being treated as invisible to awarding <u>LGBTQ+ researchers</u> for their excellence, the scientific community has journeyed upwards. Let us be inclusive, practice the correct usage of pronouns, be adaptable, create a support network, and look up to more role models, to include and secure LGBTQ+ in the STEM field.

We want to know which LGBTQ+ scientists inspired you! Write to us or comment below.



# Category

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