Hi everyone, welcome to Infinite Women. I'm your host, Allison Tyra, and today we're talking about a few of the many women who should have won Nobel Prizes in the sciences.
Mileva Marić was a brilliant physicist and mathematician, but we'll never know what all she could have accomplished because a classmate knocked her up out of wedlock and she had to give up her career to care for their children. That classmate, named Albert Einstein, later divorced her after he decided he'd rather marry his cousin, though he did pay child support, including the money when he won the Nobel for work they likely collaborated on together.

It's also worth noting that Mileva was the only woman in their class at Zürich Polytechnic and only the second woman to complete her studies in the Department of Mathematics and Physics. The couple had similar grades (her 4.7 to his 4.6) except in applied physics where she got the top mark of 5. He got a 1. She also excelled at experimental work - he did not. She had hoped to pursue a PhD, but her pregnancy and subsequent marriage derailed that plan.

Although her husband never publicly acknowledged her contributions, contemporaneous sources, including witnesses and letters between the two, indicate that much of his work was the result of collaborations with her. For example, he wrote to Mileva on 27 March 1901: "How happy and proud I will be when the two of us together will have brought our work on relative motion to a victorious conclusion." He also reputedly declared at a social gathering, "I need my wife. She solves for me all my mathematical problems".

Alice Augusta Ball was an American chemist who developed the most effective treatment for leprosy of the early 20th century. She was the first woman and first African American to receive a master's degree from the University of Hawaii, and to be a chemistry professor at the university. After studying the kava plant for her master's thesis, Ball developed a technique to make the plant's oil injectable and able to be absorbed by the body.

While it couldn't cure or fully stop the progress of leprosy indefinitely, hers was the only effective treatment for leprosy available until sulfonamide drugs were developed in the 1940s. Unfortunately, she became ill and died at age 24 before she could publish her findings, possibly the result of chlorine poisoning due to exposure while teaching in the lab. Her graduate study advisor who was also dean of the college and later university president, stole her research and, after additional trials, published her work without acknowledging her at all, even naming it after himself.

While another colleague attempted to correct this, she was largely forgotten until the 1970s, when University of Hawai'i professors found records of her research and fought for recognition for her. Since then, she has posthumously received a variety of awards and acknowledgements, including a proclamation that February 28 is now "Alice Augusta Ball Day" in Hawaii.

English chemist and crystallographer Rosalind Franklin is best known for her work on X-ray diffraction images of DNA while at King's College London. By refining existing techniques and tools, she was able to get clearer images than her colleague Maurice Wilkins, who apparently didn't like her for personal reasons. As a result, she was able to identify the "helical structure" of DNA. One image, Photo 51, taken by her student Raymond Gosling, led to the discovery of the DNA double helix for which Francis Crick, James Watson, and Wilkins shared the Nobel Prize in Physiology or Medicine in 1962. Wilkins' main contribution seems to have been showing Watson the photo Franklin's student captured using her methods under her guidance. Keep in mind, that was after Watson, who originally wanted to talk to Franklin, pissed her off by implying she didn't know how to interpret her own data. It's also worth noting that Watson racked up decades of racist, sexist, homophobic, anti-Semitic, and even fat-shaming remarks, including offensive comments about Franklin herself. Yet even he suggested that Franklin should have ideally been awarded a Nobel Prize in Chemistry; however, as Franklin

died in 1958, she would have been ineligible as the Nobel committee does not award prizes posthumously. Incidentally, at the time of her death from ovarian cancer at age 37, she was leading pioneering work on the molecular structures of viruses. Her team member Aaron Klug continued her research, winning the Nobel Prize in Chemistry in 1982. So really, she should have won twice.

These are just a few of the many women who should have won Nobel prizes in the sciences, so we'll definitely be highlighting more of them in other episodes. **Join us next time on the Infinite Women podcast and remember, well-behaved women rarely make history.**