

The Clerk's Black History Series



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Alice Augusta Ball

(July 24, 1892 – December 31, 1916)

"Chemist Who Discovered First Successful Treatment of Leprosy"



Alice Augusta Ball was born on July 24, 1892 in Seattle, Washington. When she was a child, her family moved to Honolulu in hopes that the warm weather would ease her grandfather's arthritis. When he died shortly after their arrival, the family quickly returned to Seattle. Alice graduated from Seattle High School in 1910, where she received high grades in the sciences. She attended the University of Washington where she earned a bachelor's degree in pharmaceutical chemistry. Two years later she received a second degree in pharmacy. She co-authored and published a 10-page article in the prestigious Journal of the American Chemical Society titled

"Benzoylations in Ether Solution" which was a rare accomplishment for an African American woman - or any woman - at the time.

After graduation, Alice attended the University (College) of Hawaii on scholarship to pursue her Master's Degree. Her Master's thesis, "The Chemical Constituents of Piper Methysticum," involved studying the chemical properties of the Kava plant species. Because of her research and keen understanding of the chemical makeup of plants, she was later approached by Dr. Harry T. Hollmann, the assistant surgeon at Kalihi Hospital, to study chaulmoogra oil and its chemical properties. Chaulmoogra oil was being tested to help with treatment of Hansen's Disease, also known as Leprosy, but with mixed results. The oil in its original form was too sticky for topical use and even worse as an injection because the oil would clump under the skin. And ingesting the oil was not practical because it had a putrid taste that made the patients vomit. In 1915, Alice developed a method that isolated the ethyl ester compounds from the fatty acids of the chaulmoogra oil, making it water-soluble and easier to dissolve in the bloodstream - allowing for the possibility of a safe, injectable leprosy treatment. She shared her findings with Dr. Hollmann and they soon began the process of testing. That same year Alice was awarded her Master's Degree in Chemistry from the University of Hawaii, making her the first black woman to do so. Unfortunately, before she could officially publish her research on "The Ball Method" of isolating the chaulmoogra oil, Alice fell ill after accidentally inhaling chlorine gas during a lab accident. She had previously reported the substandard ventilation system in the lab to the Dean of the college, with no response. Alice Ball was sent home to recover for six months before she died on December 31, 1916 at the age of 24.

The University's president, Dr. Arthur Dean, also a chemist, continued Alice's work using all of her previous notes, experiments, and research without giving Alice any credit. He began mass producing an injectable treatment for leprosy calling it "The Dean Method. " By 1921, he was shipping it around the world. He continued to reap the rewards of Alice's work until 1922, when Dr. Harry T. Hollmann, who originally encouraged Alice's work with chaulmoogra oil, published a paper giving Alice Ball the proper credit she deserved. "The Ball Method," as it is now rightfully called, was life-saving to leprosy patients who were often exiled to the Hawaiian island of Molokai'I to be separated from healthy residents. "The Ball Method" continued to be used until sulfonamide drugs were developed in the 1940s.

In 2000, the University of Hawaii-Mānoa placed a bronze plaque in front of a large chaulmoogra tree on campus to honor Alice and February 29 was declared "Alice Ball Day." In 2007, the University of Hawaii posthumously awarded her with the Regents' Medal of Distinction. In March 2016 Hawaii Magazine placed Alice on its list of the most influential women in Hawaiian history. In June of 2019, Seattle Washington opened the Alice Ball Park and in February 2020, a short film, "The Ball Method" premiered at the Pan African Film Festival and is now available to view on Prime Video. On November 6, 2020, a satellite named after her (ÑuSat 9 or "Alice", COSPAR 2020-079A) was launched into space.

