

Millie Hughes-Fulford, trailblazing astronaut, dies at 75

February 9 2021

Millie Hughes-Fulford, a trailblazing astronaut and scientist who became the first female payload specialist to fly in space for NASA, died following a yearslong battle with cancer, her family said. She was 75.

Hughes-Fulford was selected by NASA for its astronaut program in 1983 and five years later, in June 1991, spent nine days in orbit on the shuttle Columbia, conducting experiments on the effect of space travel on humans as part of the agency's first mission dedicated to biomedical studies, STS-40. She and her crew mates circled the Earth 146 times.

The research shaped the rest of her career and upon her return she established the Hughes-Fulford Laboratory at the San Francisco VA Healthcare System, which worked to understand the mechanisms that regulate cell growth in mammals.

"She came back to her world as a scientist and carried this experience of having flown in space and that became a unique filter through which she passed all of her scientific work," said Dr. Mike Barratt, a NASA flight surgeon assigned to Columbia, [told the San Francisco Chronicle](#).

The laboratory was active right up through Hughes-Fulford's own seven-year battle with lymphoma. She died Feb. 2, at her San Francisco home. Her death was confirmed by her granddaughter, Kira Herzog of Mill Valle.

"She was one of the bravest people I've ever met. She told me that when

she was taking off in the shuttle she had absolutely no fear," Herzog said. "She was logically thinking of what her next task was and that is how she faced everything including her cancer."

Millie Elizabeth Hughes was born Dec. 21, 1945, in Mineral Wells, a small town about an hour outside of Fort Worth, Texas. She was 5 years old when "Buck Rogers," a television show about a space adventurer premiered and she idolized Buck's sidekick Wilma Deering.

At age 16, she entered Tarleton State University, which later became part of the Texas A&M system. She majored in chemistry and biology and was often the only woman in a class full of men, who did not appreciate it when she outscored them on exams, her granddaughter said.

"There was even hostility from some of the professors and the dean," said Herzog. "They definitely did not want her in that program."

After graduating at or near the top of her class in 1968 she enrolled at Texas Woman's University, in Denton, to earn her doctorate in biochemistry. After earning her doctorate in 1972, she applied to 100 academic jobs around the country and got four responses. She accepted a lab position at Southwestern Medical Center, which later relocated to the VA hospital in San Francisco.

Hughes-Fulford was content with her research at the VA, until the moment in 1978 when she saw an ad in the back of a magazine asking for applications to be the first woman in space. There were 8,000 applicants and Hughes-Fulford made it to the final 20 before Sally Ride was selected to be the first female astronaut, aboard the Challenger in June 1983.

While going through the [selection process](#) in Houston, Hughes-Fulford learned that NASA was looking for bone researchers. She called a

colleague at the VA and told him to start working on a NASA grant. That opened the door to her 1991 trip on the Columbia.

Columbia continued to fly. On its 28th mission, in February 2003, it broke apart when returning to the earth's atmosphere, killing all seven [crew members](#).

In 2018, Hughes-Fulford partnered with Dr. Aenor Sawyer to start the University of California Space Health Program, based at UCSF. The program draws in researchers from the 10 campuses and three national laboratories.

"Millie was an inspiration on so many levels, from the surface of the earth to the low-earth orbit," Sawyer said. "She infused every conversation with compassion, optimism, energy, humor, and an unshakable confidence that a solution could be found."

Hughes-Fulford is survived by her daughter, Tori Herzog and granddaughters Shoshana Herzog and Kira Herzog, all of Mill Valley.

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Citation: Millie Hughes-Fulford, trailblazing astronaut, dies at 75 (2021, February 9) retrieved 19 April 2024 from <https://phys.org/news/2021-02-millie-hughes-fulford-trailblazing-astronaut-dies.html>

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