

Pioneers in Space Dentistry

Dr. Millicent “Mimi” Goldschmidt. Before coming to the Dental Branch, Dr Goldschmidt was Director of the Protocol to plan the Lunar Receiving Laboratory and arrange the biological tests for the first returned moon rocks. She was instrumental in developing isolation protocols for Apollo astronauts returning from the moon which ensured that any infectious organisms from the rocks or any that the crew members came back with would be detected and contained. After coming to the DB, she participated in the Skylab simulation studies, and, later, carried out microbial studies on the DB’s centrifuge.

Dr. Ira “Spike” Shannon was at the VA hospital in Houston, where he published extensively on various aspects of fluoride usage. For the Apollo missions, Dr. Shannon invented a non-foaming dentifrice that could be swallowed. This toothpaste was used on Skylab as well. Today’s crews spit into a tissue, but for Apollo, the extra trash could not be accommodated.

Dr. Lee Brown received his B.S. degree from the University of Alabama, and his M.S. and Ph.D. degrees from the George Washington University School of Medicine. From 1959 to 1961, he carried out microbiological research for the US Navy, at Camp Lejeune, N.C, and the US Naval Dental Center in Bethesda, From 1961-1968, he chaired the Dept. of Microbiology at the University of Missouri at Kansas City school of Dentistry. In 1968, Dr. Brown came to the Dental Branch, where he participated in the Skylab simulation experiments using marmosets, and was Principal Investigator for the oral health studies on Skylab.

Dr. William Frome served as dentist to NASA’s astronauts, beginning in 1966. A 25 year veteran of the US Air Force, his responsibilities at NASA covered clinical care for astronauts, inflight care, including oral hygiene and emergency care, and research on identification and resolution of potential inflight dental problems. Frome planned the dental kits for Apollo and Skylab missions and was a co-investigator with Drs. Brown and Wheatcroft on the Skylab oral health experiments. Following a worse case scenario, Skylab crews were taught to use antibiotics and painkillers, and as a last resort, to pull a crewmember’s tooth.

Dr. Merrill Wheatcroft received his DDS from the University of Missouri at Kansas City School of Dentistry, after which he served in the US Navy Dental Corps for 20 years. He joined the Dental Branch in 1960, where he chaired the Pathology Department from 1967-1974 and was a Co-Investigator on the Skylab oral health studies. He also carried out a Skylab simulation with marmosets at the Dental Science Institute. After 23 years at the DB, he retired in 1983.