

IAF/IAA SPACE LIFE SCIENCES SYMPOSIUM (A1)
Human Physiology in Space (2)

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ISRAEL AEROSPACE MEDICINE INSTITUTE RESEARCH ACTIVITY IN SPACE

Abstract

As a hub for space life sciences research, IAMI prepared a pack of divergent life science, and medical experiments aim at this special second Israeli human-crewed mission. IAMI professional team has the most extended and vast variety of Israeli bio-medical experiments in space for the past 25 years. Its first experiment took place in 1996, onboard NASA's Space Shuttle Columbia.

IAMI's bio-medical activity in space began with STS-80 and included a early embryological development study asking would we all other mammals can develop from generation to generation in space? On-board STS-95, IAMI conducted a research in bone health, which was the start of IAMI's osteoblast specialization. STS-107, with the late Col. Ilan Ramon, the first Israeli Astronaut, IAMI conducted a study of bone loss in microgravity a collaboration astrobiology study on panspermia.

Towards the close of the NASA shuttle program, IAMI conducted a set of scientific studies to create an infrastructure for future research. On-board STS-134 and STS-135. The studies included exploring the Effect of Omega-3 polyunsaturated fatty acids on Telomeres in space 2011 Space Shuttle Endeavour (STS-134); Performing a Legacy experiment honoring Columbia: Probiotic milk formula stability study in microgravity. On Space Shuttle Endeavour (STS-134); and Osteoblast MMP-1 gene-expression in microgravity space shuttle Endeavour (STS-134); Strauss water disinfection efficiency of a drinking waterborne bacteria in Microgravity 2011 on Space Shuttle Atlantis (STS-135). These studies have stayed and activated on the ISS.

These experiments included a combination of basic science and technological research. IAMI partnered with various leading academic institutions and private medical device producers to continue advancing space life science research with the goal of improving quality of life during spaceflight and on Earth.