

Research Seminar



Kathleen Rubins, PhD NASA Astronaut

Science in Extreme Environments: Building
Extraterrestrial and Earth-Based Research
Capabilities

On July 7th, 2016, Dr. Rubins launched from the Baikonur Cosmodrome in Kazakhstan to the International Space Station aboard the first test flight of the new Soyuz MS spacecraft. Together the international crew of Expeditions 48 and 49 conducted or participated in more than 275 different scientific experiments including research in molecular and cellular biology, human physiology, fluid and combustion physics, Earth and space science and technology development. Dr. Rubins was **the first person to sequence DNA in space**, eventually sequencing over 2 billion base pairs of DNA during a series of experiments to analyze sequencing in microgravity. Dr. Rubins also grew heart cells (cardiomyocytes) in cell culture, and performed quantitative, real-time PCR and microbiome experiments in orbit.

Wednesday Oct 17th, 2018
2pm – 3pm
Foege Auditorium

Dr. Rubins received a Bachelor of Science degree in Molecular Biology from the University of California, San Diego, in 1999 and a Ph.D. in Cancer Biology in 2005 from Stanford University Medical School Biochemistry Department and Microbiology and Immunology Department. She was a Principal Investigator at the Whitehead Institute for Biomedical Research (MIT/Cambridge, Massachusetts) and headed a lab studying viral diseases that primarily affect Central and West Africa before joining the NASA astronaut program.