Summary of: Cultivation of Staphylococcus epidermidis in the Human Spaceflight Environment Leads to Alterations in the Frequency and Spectrum of Spontaneous Rifampicin-Resistance Mutations in the rpoB Gene

Key findings:

- S. epidermidis cells grew to significantly lower titers in space compared to ground controls.

- The mutation frequency to RifR was significantly higher in space samples than in ground samples.

- The spectrum of RifR mutations in space samples was altered compared to ground samples.

- The space environment induced unique physiologic stresses on growing bacterial cells.

- The results suggest that the human spaceflight environment can alter the mutagenic potential of bacteria.

- The study highlights the need to understand how spaceflight affects bacterial antibiotic resistance.

- The results support previous findings on the emergence of antibiotic resistance in space.

- The study underscores the importance of understanding the biology of spaceflight to mitigate antibiotic resistance risks.