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IIT-M, NASA study potential impact of microbes on health of astronauts

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Researchers study microbial interactions taking place in International Space Station



Indian Institute of Technology Madras (IIT-M) and NASA (National Aeronautics and Space Administration in the US) Jet Propulsion Laboratory researchers have studied the interactions between microbes in the International Space Station (ISS). The study will help devise strategies for the disinfection of space stations to minimise any potential impact of microbes on the health of astronauts.

Crews, during spaceflight, may have altered immunity and limited access to terrestrial medical facilities. Therefore, studying the microbes inhabiting the space station becomes important to understand the risks associated with short-term and long-term space travel on the health of astronauts.

The present study was motivated by the earlier observations of the dominance of Klebsiella pneumoniae on the surfaces of the ISS. This pathogen has been known to cause pneumonia and other nosocomial infections. The researchers were broadly interested in understanding how this bacteria affects the growth of other microbes in the vicinity and the possible implications it could have.

Kasthuri Venkateswaran, Senior Research Scientist, Jet Propulsion Laboratory (JPL), said, “One of the ways the microbes are introduced in the sealed and closed space station is through crew members. However, the environment at the space station is different from that on Earth. The interaction between the microbes is also affected by these adverse environmental conditions in space, necessitating such studies. More knowledge on the microbes in space can help devise appropriate safety measures for long-term space travel.”