

Research to mend broken bones, test implantable devices, and inspire future explorers on way to ISS

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SpaceX CRS-25 Takes Flight from Kennedy Space Center in Florida. Credit: SpaceX

While millions of Americans plan for the upcoming holidays, a variety

of critical research and supplies will head to the International Space Station (ISS) as part of SpaceX's 26th Commercial Resupply Services mission (SpaceX CRS-26). The SpaceX Dragon spacecraft is scheduled for launch onboard a Falcon 9 rocket to the space station no earlier than November 22, 2022, from Launch Pad 39A at NASA's Kennedy Space Center in Florida.

Among the investigations launching on this mission are several ISS National Laboratory-sponsored projects intending to bring value to our nation through space-based research and technology development, while enabling commerce in low Earth orbit.

Here is a quick look at some of these payloads:

- RevBio (formerly LaunchPad Medical), a clinical-stage medical device company, will [further evaluate the company's proprietary bone adhesive](#), Tetranite, which can speed up new bone growth while reducing recovery time and discomfort in patients with a bone fracture. The company will test how well Tetranite works to regenerate bone in microgravity.
- The Houston Methodist Research Institute will test an [implantable drug delivery device that can be operated remotely](#) to enable the controlled distribution of therapeutics inside the [human body](#). If successful, the device could allow doctors to remotely control [drug delivery](#) in patients in remote areas of Earth, or even in astronauts during spaceflight.
- The University of Florida is launching its latest project in [a series of tissue chip investigations funded by the National Institutes of Health](#). Tissue chips mimic [human physiology](#), allowing researchers to evaluate the safety and efficacy of drugs for patients on Earth. This team seeks to develop a tissue chip system to culture and electrically stimulate human skeletal muscles from young and older adults. If effective, this project could lead to

- therapeutics to treat age-related muscle loss conditions on Earth.
- The [Student Spaceflight Experiments Program](#), a yearly competition for middle and high school-aged students, will send more than 20 student-led investigations to station. Among them are a fleet of MixStix experiments in the areas of crystal growth, plant biology, physics, and microbial research. Additionally, payloads supported by the Girl Scouts of America and Space Kids Global will look at brine shrimp, ants, and plant growth in low Earth orbit.

Provided by International Space Station U.S. National Laboratory

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