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Redwire Launching Upgraded 3D Bioprinter to Space Station to Investigate New Treatment to Aid Military Service Members, Expands Crop Production Research and Materials Testing on Orbit

JACKSONVILLE, Fla.--(BUSINESS WIRE)-- Redwire Corporation (NYSE: RDW), a leader in space infrastructure for the next generation space economy, is launching its upgraded 3D bioprinter, the BioFabrication Facility (BFF), along with three other payloads on Northrop Grumman's 18th cargo resupply services mission (NG-18) for NASA to the International Space Station (ISS). The mission is scheduled to lift off no earlier than Sunday, November 6 at 5:50 a.m. EST from the Mid-Atlantic Regional Spaceport Pad 0A on Wallops Island, Virginia.

BFF is an exciting capability that 3D prints human cells in space to fabricate complex tissue structures and eventually organs that could one day be used to help patients on Earth. Redwire is working with the Uniformed Services University of the Health Sciences Center for Biotechnology (4DBio3), a biomedical research center that explores and adapts promising biotechnologies for warfighter benefit, to explore how space bioprinting could help treat meniscal injuries, one of the most common orthopedic injuries affecting U.S. military service members. The BFF-Meniscus-2 investigation will leverage BFF and Redwire's ADvanced Space Experiment Processor (ADSEP) facility, both launching onboard NG-18, to bioprint a human knee meniscus in space that will be studied in a lab following the sample's return to Earth.

"BFF is game-changing technology that could have significant implications for the future of human health and patient care on Earth," said Redwire Executive Vice President of In-Space Manufacturing and Operations John Vellinger. "The ISS provides a critical testing platform to advance these cutting-edge technologies that are enabling critical investigations from commercial users and the scientific research community that will one day extend to future commercial space stations."

3D bioprinting entire organs in space to benefit patients on Earth is a long-term goal for BFF. In the near-term, BFF is also a valuable tool for drug efficacy testing. BFF can print and culture organoids, an artificially grown mass of cells or tissue that resembles an organ. Researchers can test new drug compounds on these organoids and derive meaningful data which can greatly benefit drug development research, disease modeling research and tissue engineering approaches.

Redwire is also launching a plant science investigation, The Epigenetic Adaptation to the

Spaceflight Environment - Accumulated Genomic Change Induced by Generations in Space (Plant Habitat-03) investigation, that could help identify the genetic elements that increase the adaptability of plants to spaceflight. The Plant Habitat-03 investigation, which will be conducted using NASA's Advanced Plant Habitat—an automated plant growth facility managed by Redwire, builds upon Redwire's three previous successful investigations that grew radishes, chili peppers, and cotton tissue culture in space. This investigation could help develop strategies for adapting crops and other economically important plants for growth in marginal and reclaimed habitats on Earth.

Also launching on this mission is the Asymmetric Sawtooth and Cavity-Enhanced Nucleation-Driven Transport investigation, or PFMI-ASCENT. The investigation seeks to demonstrate a passive cooling system for electronic devices in microgravity using a microstructured surface. The investigation will use NASA's space-based research furnace, the Pore Formation and Mobility Investigation (PFMI) facility, which is managed by Redwire. The long-term goal of this research is to develop a simple, passive, self-regulating microstructured surface technology for heat sinks used in consumer electronics and avionics. The investigation is a collaboration between researchers at Auburn University and University of California-Davis.

Redwire has a large and diverse catalog of equipment and services for conducting research in microgravity for federal, institutional and industrial customers. The Redwire technology launching on this mission includes experiments focused on advancing biomedical capabilities, advanced materials manufacturing, and plant biology, demonstrating the breadth of Redwire's on-orbit capabilities to accelerate more scientific discovery and deliver more beneficial products to Earth.

To learn more about the science and technology that Redwire is launching on Northrop Grumman's NG-18 cargo resupply mission, visit: www.redwirespace.com.

About Redwire

Redwire Corporation (NYSE: RDW) is a leader in space infrastructure for the next generation space economy, with valuable IP for solar power generation and in-space 3D printing and manufacturing. With decades of flight heritage combined with the agile and innovative culture of a commercial space platform, Redwire is uniquely positioned to assist its customers in solving the complex challenges of future space missions. For more information, please visit www.redwirespace.com.

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