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Redwire's SpaceMD Announces its First Commercial Mission on SpaceX's Starfall Spacecraft to Scale In-Space Pharmaceutical Development

SpaceMD plans to fly 32 PIL-BOXes in 2028 on this Starfall mission

JACKSONVILLE, Fla.--(BUSINESS WIRE)-- Space Microgravity Development LLC (SpaceMD), a wholly owned subsidiary of Redwire Corporation (NYSE:RDW) and venture company focused on leveraging the microgravity environment to create dynamic innovations, announced today that it has signed a contract for a Starfall mission. Starfall is SpaceX's new spacecraft that enables affordable, routine access to a microgravity environment and provides unique opportunities for on-orbit manufacturing, scientific research, and testing. The agreement creates a scalable new pathway for Redwire to continue expanding its commercial pharmaceutical research and manufacturing business to serve a growing customer base.

SpaceMD's first Starfall mission is planned for launch in 2028 and is expected to have the capacity to carry up to 32 of Redwire's Pharmaceutical In-Space Laboratory (PIL-BOXes), making it the largest dedicated commercial microgravity research mission flown to date. Drug candidates selected through SpaceMD's research initiatives will leverage the highly tailorable microgravity environment and mission duration provided by Starfall before returning to Earth for analysis, accelerating pharmaceutical development and other forms of commercial research.

SpaceMD will develop a new variant of PIL-BOX, to contain and optimize research aboard the entire Starfall spacecraft, ensuring immediate value to pharmaceutical companies, biotechnology innovators, and academic researchers. This work builds upon hundreds of pharmaceutical and life sciences experiments and R&D that Redwire has flown and conducted on crewed systems from the Space Shuttle to the International Space Station (ISS).

"Space-based pharmaceutical development is reaching an inflection point," said John Vellinger, CEO of SpaceMD. "For decades, Redwire has built and operated the infrastructure that has enabled critical progress in microgravity research. Now, by combining our flight-proven microgravity payloads, such as PIL-BOX, with SpaceX's innovative transportation capabilities, we're dramatically expanding our ability to serve customers, increase research cadence, and accelerate the creation of life-changing therapies."

SpaceMD's flight-proven PIL-BOX technology enables researchers to crystallize drug compounds in microgravity to develop improved formulations and new therapeutics. Since November 2023, 54 PIL-BOX systems have flown to the ISS, with 12 more being prepared

for launch over September, October, and December of this year. SpaceMD has successfully crystallized 45 unique compounds, including insulin and molecules targeting cancer, cardiovascular disease, obesity, and diabetes. With the Starfall spacecraft, SpaceMD expects to significantly expand the scale and frequency of commercial microgravity research, accelerating scientific discovery and in-space pharmaceutical development.

About SpaceMD

SpaceMD is a subsidiary of Redwire Corporation focused on leveraging the microgravity environment of space to create new advances in pharmaceuticals, biotechnology, and other fields. SpaceMD utilizes innovative, flight-proven Redwire hardware to conduct this potentially life-enhancing work. SpaceMD uses the unique nature of space to benefit life on Earth.

About Redwire

Redwire Corporation (NYSE:RDW) is an integrated space and defense tech company focused on advanced technologies. We are building the future of aerospace infrastructure, autonomous systems, and multi-domain operations leveraging digital engineering and AI automation. Redwire's approximately 1,400 employees located throughout North America and Europe are committed to delivering innovative space and airborne platforms transforming the future of multi-domain operations. For more information, please visit RDW.com.

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Media Contact:
Tere Riley
Tere.Riley@rdw.com

OR

Investors:
Investorrelations@rdw.com

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