

WINSTON-SALEM JOURNAL

Reporter Richard Craver, April 18, 2022

Taking the development of regenerative medicine into outer space is at the heart of a partnership announced Monday involving two Winston-Salem research entities and Axiom Space, which is developing the first commercial space station.

Officials with Wake Forest Institute for Regenerative Medicine, already a global leader in translating scientific discovery into clinical therapies, described the partnership as the "next frontier" in research and manufacturing.



Dr. Anthony Atala, director of Wake Forest Institute of Regenerative Medicine, shares details of a planned outer space research initiative. Wake Forest Institute for Regenerative Medicine

Joining the two groups is Innovation Quarter tenant RegenMed Development Organization (branded as ReMDO), which is based in Bailey Power Plant. It is dedicated to advancing manufacturing scale-up and automation in regenerative medicine. ReMDO debuted locally in June.

"We can literally take the regenerative medicine field to a whole new level," said Dr. Anthony Atala, the long-time director of the regenerative medicine institute.

The biggest expected benefit is research, done initially on the International Space Station, "will be free from the constraints of gravity, providing great potential and benefits," according to the entities.

"It will enable our scientific research teams to advance biomanufacturing to bring new treatments that cannot be developed on Earth, and treatments for conditions that affect the human body when exposed to the harsh environment of space travel," Atala said.

The partnership's primary goal is further accelerating the translation of regenerative medicine technologies into products and services for patients.

The first step is Axiom becoming a tenant in ReMDO's Innovation Accelerator, most importantly to gain access to its test bed.

"This partnership paves the way for an entire commercial industry on board Axiom's space station," Atala said.

Innovation Accelerator

The Innovation Accelerator is a key component of the regenerative medicine ecosystem called the Regenerative Medicine Hub within Innovation Quarter.

A number of Wake Forest regenerative medicine start-ups and established companies already operate in the hub and elsewhere in the region.

"As a member of the Innovation Accelerator, Axiom Space brings exciting capabilities that exist nowhere else in the world," said Josh Hunsberger, chief technology officer of ReMDO.

"In addition to our initial focus, we anticipate other opportunities will result from this collaboration that will lead to regenerative medicine breakthroughs."

Christian Maender, Axiom's director of In-Space Manufacturing and Research, said his group chose the Wake Forest partners to determine the viability of commercial space initiatives for regenerative medicine.

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