

# Greg Olsen To Perform Research On ISS For European Space Agency

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Space Adventures announced Tuesday a science agreement with the European Space Agency, for a research program to be performed with Greg Olsen, Ph.D. who will visit the International Space Station next month.

Under the agreement, Dr. Olsen will act as a test subject for three experiments of ESA's onboard research program.

The ESA experiments in which Dr. Olsen will participate aboard the ISS all aim to study the response of the human body to the microgravity environment. The experiments are designed to cast light on processes that cause discomfort and pain to millions, such as nausea, lower back pain, and the evolution of the body's bacterial flora.

"I do not consider myself a space tourist," comments Dr. Olsen.

"Learning how to live and work in space and my upcoming mission are truly a dream come true for me. But I am first and foremost a scientist, and I am going to carry out real science aboard the ISS. I am proud that my work will help understand medical conditions that affect so many people on Earth."

"We, at Space Adventures, are very much in support of Greg's scientific experiments while aboard the ISS. We encourage our clients to pursue their interests and we assist in making it happen," said Eric Anderson, president and CEO of Space Adventures.

"Greg is very dedicated to the study of science and should be commended for committing his time to assist ESA with their program. We hope to continue this collaboration of efforts with future clients as well."

Dr. Olsen, a successful entrepreneur and researcher, as founder of EPITAXX, and Sensors Unlimited, rose to his eminent position from humble beginnings. He grew up in Brooklyn, the son of an electrician and a school teacher, and pushed himself to graduate in electrical engineering and physics and gain a Ph.D. in material science.

With his mission, carried out under the banner "Science and technology are the easy way up," Dr. Olsen wants to bring science and technology to life and motivate young people to study scientific subjects.

The first experiment, called Motion Perception or MOP, will help ESA better understand the mechanisms behind motion sickness, vertigo and nausea. These conditions affect millions and may be seriously debilitating. MOP will study the vestibular system, which is responsible for balance and orientation. People exposed to stronger or weaker gravitational fields often suffer from a form of sea sickness.

It happens to astronauts as they adapt to weightlessness, and it happens to those who come out of a centrifuge having experienced two to three times Earth's gravity for several hours.

The experiment will check how the vestibular system adapts to weightlessness and will compare this to the changes it undergoes in a centrifuge. "I hope my work with these experiments will help people suffering from equilibrium disorders and kids whose motor functions aren't working properly," said Dr. Olsen.

Another problem affecting millions is lower back pain. Astronauts, too,

suffer from this condition, and ESA is studying it on the ISS with various astronauts performing the Low Back Pain Experiment, which aims to understand how changes in muscles influence lower back pain.

In astronauts, this pain is probably due to the atrophication during weightlessness of a deep muscle corset which maintains our posture on Earth. This leads to ligament strain, which may in turn cause lower back pain. Understanding this process will provide precious data to help better understand and thus treat this serious condition.

Finally, Dr. Olsen will explore the world of the station's smallest inhabitants. Over the years, dozens of flights from Russia and the United States have brought many people and many tons of equipment from all over the world to the space station.

Obviously, much of it could not be sterilized. With the Sample Experiment, Dr. Olsen will help to collect more data to detect and record the different species of microbes that have made a home for themselves on the ISS - and on its astronauts. The study will reveal how microbial populations are affected by spaceflight, and show if and how their genetic mutation rate has been affected by the special conditions in orbit.

Dr. Olsen is scheduled to launch to the ISS on October 1 from the Baikonur Cosmodrome in Kazakhstan. He will be joining the Expedition 12 crew which will also include American astronaut William McArthur and Russian cosmonaut Valery Tokarev.

Space Adventures, the only company to have successfully launched private space explorers to space, is headquartered in Arlington, Va. with offices in Cape Canaveral, Fla., Moscow and Tokyo. It offers a variety of programs such as Zero-Gravity and MiG flights, cosmonaut training, spaceflight qualification programs and reservations on future suborbital

spacecrafts. The company's advisory board comprises Apollo 11 moonwalker Buzz Aldrin, shuttle astronauts Kathy Thornton, Robert (Hoot) Gibson, Charles Walker, Norm Thagard, Sam Durrance, Byron Lichtenberg and Skylab astronaut Owen Garriott.

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