



PRESS RELEASE - FOR IMMEDIATE RELEASE

FRUIT FLY STUDENT EXPERIMENT ON ITS WAY TO THE INTERNATIONAL SPACE STATION CONNECTS FOUR ORGANIZATIONS TO FOSTER YOUNG SCIENTISTS

KENNEDY SPACE CENTER, FL (September 22, 2014) - Since its inception in November 2011, a student experiment called the Ames student Fruit fly Experiment (AFEx) was successfully launched on SpaceX-4 Dragon from Kennedy Space Center on Sunday, September 21, 2014. The student flight opportunity was attained by the American Society for Gravitational and Space Research, and its organizational sponsor, Science and Technology Corporation (STC), a Virginia corporation headquartered in Hampton, Virginia. AFEx is being flown with NanoRacks, LLC, an industry leader in low-earth orbit space NanoRacks is working with NASA under a Space Act Agreement for the use of the U.S. National Lab. Under the scientific guidance of Dr. Sharmilla Bhattacharya and her team at NASA's Ames Research Center in Moffett Field, California, AFEx, is an experiment designed to study the ability of fruit flies to withstand the conditions of an altered gravitational environment. There have been twelve bachelors and master level students that have worked on this experiment since its inception. The experiment will fly in an enclosed, environmentally controlled 10 by 10 by 15 centimeter Nanoracks Module that will track the flight path of these flies. The experiment is important because it will tell us how oxidative stress, which is the breakdown of a basic biochemical process in cells, affects the neurobehavior of the fruit fly. For humans, oxidative stress has been implicated in the cause of many diseases, such as cancer and Alzheimer's and has an impact on the body's aging process. The most challenging part of the experiment was designing a high-resolution video system using a single camera and mirrors to capture the rapid and erratic flight path of the fruit flies during day and night cycles (i.e., infrared). The students were involved in every stage from conceptual design to developing the hardware and software.

NASA has been impressed with what the students have been able to achieve. "It's amazing how the students have devised such a complex experiment and developed all of the systems to perform the research. NASA is committed to developing the next generation of space biologists, and these students demonstrated that they, indeed, have the 'right stuff' to do research in space", says Sidney Sun, Chief of NASA's Space Biosciences Division.

The experiment is the result of a quadrilateral agreement with between ASGSR, a gravitational science society who fosters young scientists; NanoRacks, LLC, a commercial space service provider; STC, a private company that values investment in the next generation; and NASA's Ames Research Center scientist mentors who believe it is critical to train the next generation of scientists.

About ASGSR: ASGSR brings together a diverse group of scientists and engineers to encourage an exchange of ideas bridging basic and applied biological and physical science research and technology in space and on the ground. The organization is devoted to furthering the field of gravitational research. www.asgsr.org

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