



# SSEP

## Student Spaceflight Experiments Program



### SSEP Mission 16 to ISS: *Ranger* Experiments Flying on SpaceX-26 Payload Summary

Contact: Dr. Jeff Goldstein, SSEP National Program Director, 301-395-0770, jeffgoldstein@ncesse.org

#### 24 Experiments from the SSEP Mission 16 to ISS *Ranger* Payload Flying on SpaceX-26

	Community	Experiment	Team	Grades	At Launch
1	Ukraine	Dental Filling Material Solidification in Microgravity Conditions	2 Co-Principal Investigators, 2 Co-Investigators	11	X
2	Ukraine	The Effects of Microgravity on Potassium Hexacyanoferrate (III) Crystals	2 Co-Principal Investigators	8	X
3	Coquitlam, British Columbia, Canada	The Changes in Beneficial Metabolites by Lactic Acid Bacteria in Microgravity	2 Co-Principal Investigators	9	X
4	Moreno Valley, California	The Effects of Microgravity On The Germination Of Carrot Seeds	2 Co-Principal Investigators, 2 Co-Investigators, 1 Collaborator	11 and 12	X
5	Perris, California	The Effect of Microgravity on the Germination of Quinoa	1 Principal Investigator, 2 Co-Investigators	6	
6	Redlands, California	The Effect of Microgravity on Weevils ( <i>Sitophilus Oryzae</i> ) Found in Rice	1 Principal Investigator, 2 Co-Investigators, 2 Collaborators	9 and 10	

7	Hillsborough County, Florida	The Effects of Microgravity on the Bio-electrolysis of <i>Anabaena sp. PCC 7120</i>	6 Co-Principal Investigators	8	X
8	Hillsborough County, Florida	Purslane Spaceflight Proposal	4 Co-Principal Investigators	6 and 7	X
9	Ocala, Florida	What is the Effect of Microgravity on the Amount of Ethanol Produced by Yeast Fermentation?	2 Co-Principal Investigators	5	X
10	Lake Charles, Louisiana	Sunflower Microgravity Growth	1 Principal Investigator, 2 Co-Investigators	6 and 7	X
11	University System of Maryland, Maryland	Generation of Metallic and Ceramic Nanoparticle Aggregates in Microgravity for Novel Insights into Planetary Formation	2 Co-Principal Investigators, 1 Investigator	14	
12	Grand Blanc, Michigan	Microbial Solutions for Food Waste In Space	5 Co-Principal Investigators, 2 Collaborators	8	
13	Hoboken, New Jersey	The Effect of Microgravity on Catheter Biofilm Formation by the Bacterium <i>Pseudomonas fluorescens</i>	2 Co-Principal Investigators	11	X
14	Albany, New York	Microgravity's Effect on the Germination of Basil Seeds Using Hydroponics	5 Co-Principal Investigators	8	
15	Buffalo/Niagara, New York	The Effect of Microgravity on the Resistance of <i>Staphylococcus epidermidis</i> to Oxacillin	2 Co-Principal Investigators, 2 Co-Investigators	10	X
16	Garden City, New York	How does Microgravity Affect the Germination of a Tomato Seed?	4 Co-Principal Investigators	7	X
17	Norwood, New York	The Effects of Microgravity on <i>Chlamydomonas reinhardtii</i> Algae when Exposed to Optimal Nutrient Levels	3 Co-Principal Investigators	8 and 10	X

18	Pickerington, Ohio	Algae: The Fuel Source of Space	2 Co-Principal Investigators	12	X
19	Bandera, Texas	Will the Germination Rate of Quinoa Seeds be Affected by a Microgravity Environment?	4 Co-Principal Investigators	8	X
20	Burleson, Texas	The Effect of Microgravity on Agar Consumption of Penicillium Mold	6 Co-Principal Investigators	6	
21	Ector County, Texas	Effects of Microgravity on formation of <i>Serratia marcescens</i> Biofilm	1 Principal Investigator	12	X
22	Texarkana, Texas	The Effects of Space Travel and Microgravity on Hybrid Brine Shrimp Eggs	1 Principal Investigator, 2 Co-Investigators	6	
23	Bellingham, Washington	Germination of the <i>Oplopanax Horridus</i> (Devil's Club) in a Microgravitational Environment	6 Co-Principal Investigators	10	
24	iForward-Grantsburg, Wisconsin	Growing and Glowing Mushrooms in Microgravity	5 Co-Principal Investigators	6	

The Student Spaceflight Experiments Program (SSEP) is a program of the National Center for Earth and Space Science Education (NCESSE) in the U.S. and the Arthur C. Clarke Institute for Space Education internationally. It is enabled through a strategic partnership with Nanoracks, LLC, which is working with NASA under a Space Act Agreement as part of the utilization of the International Space Station as a National Laboratory. SSEP is the first pre-college STEM education program that is both a U.S. national initiative and implemented as an on-orbit commercial space venture.