



National Aeronautics and  
Space Administration

# 'Plants for Space Exploration and Earth Applications' Workshop Report

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November 13, 2024

Biological & Physical Sciences





# ISLSWG 'Plants in Space' Workshop Highlights



- Held from September 3-6 2024 in Liverpool, United Kingdom
- Hosted by the European Low Gravity Research Association (ELGRA)
- ISLSWG-member space agencies presented in a panel on the 'Future of Microgravity Related Research'
- 36 speakers consisting of early career and established investigators, in two pre-workshop and four workshop sessions
- 11 posters relevant to the workshop themes. More than 50 of about 200 ELGRA delegates participated in the workshop

# ISLSWG 'Plants in Space' Workshop Highlights



Cross-agency panel on the microgravity research



Kirima Junya (JAXA) presenting on-going plant research in the Kibo utilization module



Dr. Matt Gilliam  
University of  
Adelaide,  
Director for  
Australia  
Plants for  
Space (P4S)

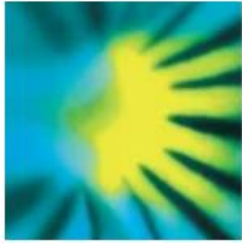


Discussions and  
constructive  
debates  
followed each  
scientific session

# Workshop participants call for stronger international collaborations

- Significant advances in plant gravitational biology and BLiSS since 2012 ISLSWG workshop in Freiburg, Germany
- More playgrounds on Earth (e.g., Biobase, EDEN-ISS, Ground Test Demonstrator, Moon/Mars simulation). Better to fail on Earth than in space
- Better ground and on-orbit controls
- Conducting plant research in space is difficult. Best practices/lessons learned should be shared widely and faster
- Need for a facility database from the international plant space science community
- Develop avenues for international sharing of spaceflight samples to get bonus science
- Leverage Artemis accords for international cooperation
- Call for the international plant space science community to consolidate behind a big, tangible goal

ISLSWG workshop report  
will be submitted as a  
Viewpoint article in March  
15, 2025



New Phytologist

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Alistair M. Hetherington , Sarah Lennon 

First published: 07 July 2015 | <https://doi.org/10.1111/nph.13541>

## Tentative Paper Title:

***Fostering International Collaboration to Maximize the Value and Impact of Plants for Space Exploration***

## Excerpts from the Summary of the Paper

*‘Realizing the vision of plants as enablers of space exploration demands innovative approaches, including predictive modeling, synthetic biology, robust Earth analogs, and deployment of instruments in space that can reliably monitor biology. Finally, we advocate building a strong international community that will champion the sharing of resources, facilities, knowledge, and data to accelerate progress.’*