

Space BD

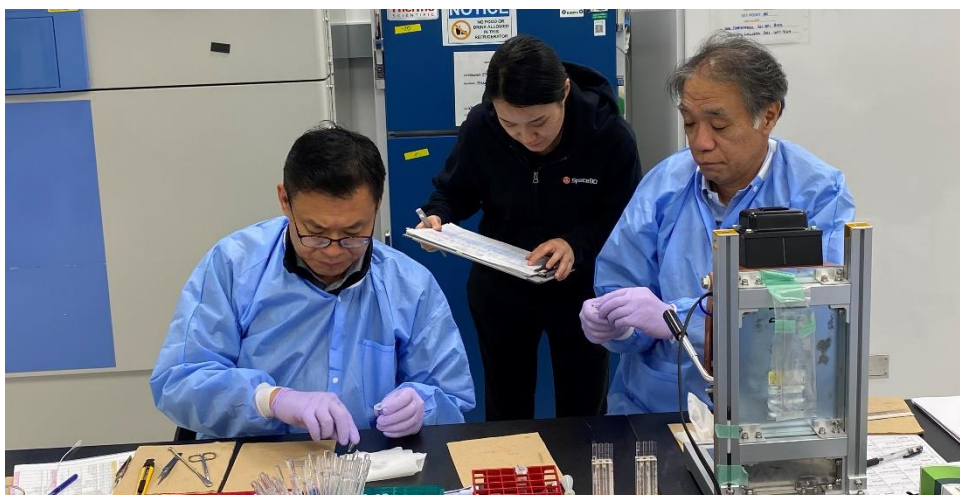
4th Launch to the ISS in the Life Science Business Completed, Protein Crystallization Experiments Aboard ISS to Begin Experimental samples made by Gakushuin Boys' Senior High School & Girls' Senior High School students on board



Image of SpX-29 launch (Photo: NASA)

Tokyo—Space BD, a leading Japanese space startup, announces that samples from companies and research institutions in Japan and overseas were successfully launched to the International Space Station (ISS) through the Life Science Business, which leverages the ISS Japan Experimental Module Kibo, and that experiments aboard the ISS have begun.

Samples were loaded on the Dragon resupply ship in the NASA 29th Commercial Resupply Service mission (SpX-29) operated by SpaceX, and launched from the Kennedy Space Center in Florida in the United States at 10:28 am on Friday, November 10, 2023 (Japan time). The ship then docked at ISS at 7:07 pm on Saturday, November 11, 2023.



Packing of samples to be loaded on SpX-29 at NASA's Kennedy Space Center (Space BD employee in rear)

In partnership with the Japan Aerospace Exploration Agency (JAXA) and MARUWA Foods and Biosciences, Inc., Space BD is leading the search for crystallization conditions on Earth, space experiment conformity reviews, sample packing work, and other work. For this launch, in addition to approximately 50 total samples from the JAXA open call for academic projects, there are also protein samples from a crystallization experiment conducted by 15 high school students who participated in the “Protein Crystallization Experiment Workshop” held for Gakushuin Boys’ Senior High School and Girls’ Senior High School students. This workshop was conducted as one of the collaboration programs of the Industry-Academia Collaboration Agreement signed by Gakushuin University and Space BD in March 2022, and was planned for students in the Boys’ Senior High School and Girls’ Senior High School as part of the integrated education program provided by the Gakushuin University Faculty of Science. Once the samples are returned, an experiment is planned to compare the space experimental samples with the Earth experimental samples. Space BD also offers educational programs aimed at nurturing high school students' interest in space business and life sciences (in the area of drug discovery) by providing them with opportunities to be involved in space experiments.



Gakushuin Boy’s Senior High School & Girls’ Senior High School students engaged in protein crystallization experiment

■ About Space BD life science business and protein structure analysis service

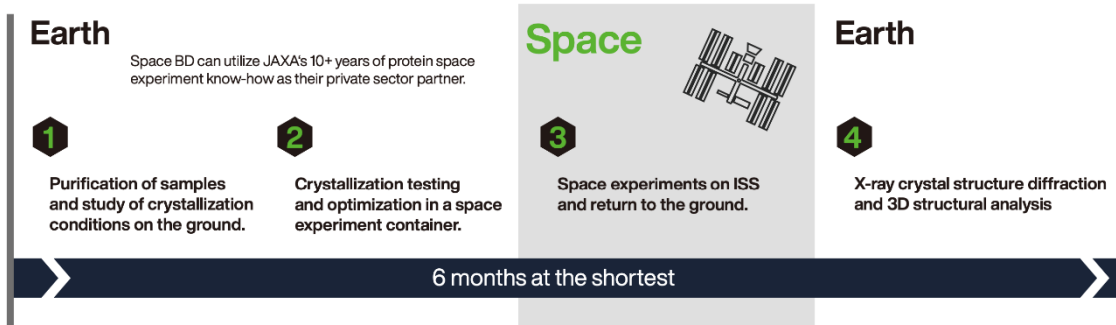
Space BD utilizes the onboard experimental facilities of the ISS "Kibo" to develop a life science business "Protein Structure Analysis Service" using technology for producing high-quality protein crystals that takes advantage of the characteristics of microgravity space. This service supports the determination of target protein structural information and the verification of interactions with compounds, etc., which are important in drug discovery research.

In the selection of candidate compounds, which requires a huge amount of time in the drug discovery process, conducting experiments based on high-quality protein structural information greatly shortens the lead time and contributes to cost reduction.

▼Video

<https://www.youtube.com/watch?v=zMXvUgsL6GE&t=2s>

<Contact>



■ **About MARUWA Foods and Biosciences, Inc.**

Company : MARUWA Foods and Biosciences, Inc.
 Address : 170-1 Tsutsui-cho, Yamatokoriyama-shi, Nara, Japan
 Management : Koji Inaka, President
 Establishment : January, 1974
 Business : Provide services and products related protein
 URL : <https://maruwafoods.jp/>

■ **About Space BD**

We at Space BD are a one-stop provider of solutions for those in the space utilization field. Not only can we deliver payloads to space by a variety of methods and facilitate the use of International Space Station assets, but we can also assist with everything from business plans to hands-on technical operations. As of November 2023, Space BD's performance record marked over 70 satellite projects and over 450 orders.

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