PRESS RELEASE

Space BD Inc.

May 10, 2021

Space BD is appointed by JAXA as a private partner for High-Quality Protein Crystal Growth Experiment Service on the ISS Kibo Contributing to life science R&D areas such as drug discovery

Tokyo- Space BD Inc., the leading Japanese space startup providing access to space, announced that it has been appointed as the sole private partner by the Japan Aerospace Exploration Agency (JAXA) for its “Selection of Private Partners in the High-Quality Protein Crystal Growth Experiment Service.” Space BD signed a basic agreement with JAXA on May 6, 2021. The experiment service is one of the privatization initiatives for ISS Kibo utilization led by JAXA.

In this project, Space BD will inherit the various know-how from JAXA through the contracted operational preparation for the high-quality protein crystal growth while improving the convenience of users and the efficiency of the experiment system by introducing a new IT system including the original smartphone App. Moreover, by utilizing the experiment opportunities provided by JAXA, Space BD will offer the service to develop business around the world.

This agreement with JAXA utilizes the microgravity environment unique to space to grow the high-quality protein crystals that are difficult to achieve on ground. The high-quality crystals can elucidate the precise three-dimensional structure of proteins. It is expected to contribute to the development of basic science and the industrial application of various life sciences such as drug discovery.

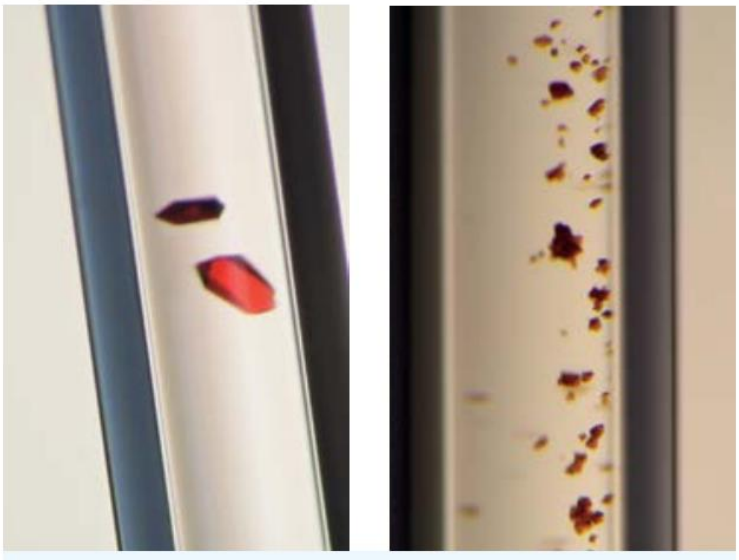

Figure 1 Protein crystals of hemoglobin produced in the ISS (left) and on the ground (right) ©JAXA

For example, in drug discovery, precise three-dimensional structure information of target protein helps improve the prediction accuracy and calculation speed when searching for effective drug candidates.

In addition to drug discovery, it is expected to be applied in a wide range of research, such as industrial enzymes including high-efficiency hydrogen generation, decomposition catalysts, and biomass decomposition catalysts, to contribute to drug discovery solutions, energy, and food problems. Furthermore, it can be used as a life science education program related to space.

Following this agreement, Space BD has formed a partnership with MARUWA Foods and Biosciences Inc., which has worked with JAXA (previously NASDA) for more than 20 years and independently developed a support system for drug discovery and protein research. With the partnership, Space BD has established a one-stop Research & Development Services for life sciences, covering space experiments and ground analysis.

Space BD has already been selected as a commercial service provider by JAXA for the satellite deployment service from ISS Kibo and the utilization of the ISS Kibo external platform. With this latest agreement, Space BD will lead a wide range of promotion of the use of ISS in Japan and overseas. It aims to create synergy with life sciences and numerous business sectors by offering a unique R&D service combining experiments in space and on ground.

Lastly, with the launch of this service, Space BD aims to engage in the development and operation of IT systems for ISS service users. Space BD will continue to contribute to the realization of “quick,” “economical,” and “easy” use of space and the expansion of the space industry.

■ **Comment from Mac Kanazawa, COO, Director, Business Development at Space BD**

We are very grateful for being appointed as JAXA’s sole commercial service provider for the High-Quality Protein Crystal Growth on the ISS. To ensure the service becomes self-sustainable, we will make sincere efforts to develop new markets and improve service quality by utilizing our domestic and overseas demand acquisition and technological capabilities. Also, for the commercialization of low earth orbit, we believe that it is essential to develop demand in a wide range of fields without fear of failure and carefully listen to the voices of customers. As a leading company using the ISS, we will continue to work on business development in this field with speed and commitment.

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■ Appendix

Press release from JAXA about the news
https://humans-in-space.jaxa.jp/en/biz-lab/news/detail/001417.html
Website: Human Spaceflight Technology Directorate, JAXA
https://humans-in-space.jaxa.jp/en/
Website: JAXA Protein Crystal Growth on the International Space Station
https://humans-in-space.jaxa.jp/protein/en/index.html

■ Overview of the service partner

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	:	http://www.maruwafoods.jp/index.php

■ About Space BD

Space BD has expertise in business development to explore new possibilities of space utilization. Since its foundation in 2017, Space BD has provided the services to accelerate the industrialization of space by raising “to create the industry and company representing Japan in the world.” Space BD offers the following businesses; “Launch Service,” providing the satellite launch and the International Space Station utilization opportunities; “Space Equipment Import/Export,” supporting to import and export the components and test equipment related to satellite development; “Education” applying the astronauts training to the education program to grow next leaders in the societies; “Space Utilization” developing the new businesses utilizing space by combinations of SDGs, etc.; and “life science R&D” starting from this appointment. Space BD offers the optimum solutions to utilize space to everyone worldwide as a business development professional with these businesses.
https://space-bd.com/en/

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