

*[Provisional Translation Only]*

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## **Introducing SOLTIMO – World’s First High-Speed Automated Microbial Growth Monitoring System –**

JDI has developed SOLTIMO, the world's first microbial growth monitoring system capable of continuously observing and analyzing microbial growth using transmitted light. SOLTIMO is set for release in December 2024, and will dramatically accelerate medical professionals' ability to render accurate clinical judgements on behalf of their patients, improving patients' health outcomes while freeing medical and life science professionals from lengthy and onerous manual observation activity.



SOLTIMO is a unique monitoring system that uses a large, highly precise TFT (thin film transistor) optical sensor to observe microbial growth and analyze data in real time. SOLTIMO senses the light transmitted through a sample cultured on a growth medium. SOLTIMO is expected to contribute to improved observation efficiency, faster clinical judgments, and standardization in medical and biological testing methods.

With SOLTIMO's microbial growth observation, the conventional procedure of removing the growth medium from an incubator (i.e., a microbial culture device) for observation is no longer required. Furthermore, SOLTIMO's real-time observation allows for quicker judgment, and enables automated analysis of measurement results, thereby improving efficiency.

By leveraging JDI's world-leading flat panel display technology, the SOLTIMO device itself has been made compact and thin, allowing for more than 10 SOLTIMO units to be

installed simultaneously in a standard-sized incubator.

As an antibiotic susceptibility analyzer, SOLTIMO can also automatically carry out the disk diffusion test, identify the bacterial species and contribute to addressing AMR (antimicrobial resistance) issues. SOLTIMO-M, a medical device equipped with this function, will be available through CarbGem Inc., JDI's partner in developing SOLTIMO.

## Reference Information

### About CarbGem Inc.

CarbGem is a startup company aiming to contribute to society by solving the global issue of antimicrobial resistance by applying its proprietary AI analysis technology to the field of bacterial infections through the fusion of biology and digital technology, and through open innovation with leading research and development institutions both in Japan and overseas.

Business purpose: Development and sales of next-generation bio- and medical-related technologies utilizing AI and bioinformatics in the field of bacterial infectious diseases.

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### Disk Diffusion Test

A disk diffusion test is one method used to determine the susceptibility of microbes to antibiotics. It is frequently carried out in clinical settings for its easy set up and ability to test large numbers of samples simultaneously. The assay is used to screen antibiotics candidates against infectious diseases.

### AMR (Antimicrobial Resistance) Issues

AMR occurs when microbes (bacteria, viruses, etc.) evolve mechanisms that protect them from antimicrobials (drugs used to treat infections), which enables microbes to survive antibiotic treatment, complicating infection management and treatment options. Misuse and improper management of antimicrobials are primary drivers of this resistance. It is important to identify resistant microbes and control the necessary and enough effective antibiotics in the early stage.

### About SOLTIMO

SOLTIMO is the world's first technology that allows continuous observation of the growth medium using transmitted light without removing the medium from the incubator, and automatically analyzes and evaluates the data using a proprietary analysis algorithm. JDI has investigated specialist journals and other presentations and publications both in Japan and overseas and have not found any evidence of a similar product or capability.

SOLTIMO Product Page: [https://www.j-display.com/en/product\\_tech/soltimo.html](https://www.j-display.com/en/product_tech/soltimo.html)

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