

Demonstration of mass production of an AI-based high-throughput cell analysis and sorting system (ThinkCyte K.K.)



City	Year of Establishment	Founder	Website
Bunkyo, Tokyo	2016	Waichiro Katsuda	https://thinkcyte.com/

Partner VC	Latest round of Fundraising	Valuation
Nomura SPARX Investment	Series C	Non-disclosure

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○ Business Plan

By constructing and demonstrating a mass production system for instruments equipped with "Ghost Cytometry" technology, which combines machine learning (AI) with new ultrafast imaging technology and microfluidic technology, it enables high-throughput analysis and sorting based on cell morphology and structural information. This helps solve global challenges, such as extending healthy life expectancy while reducing healthcare costs. As a result, it becomes possible to elucidate the pathology of cancer and immune diseases, discover new drug targets, and screen for pharmaceuticals. Furthermore, in the long term, the aim is to realize new cell therapies and regenerative medicine, as well as early diagnosis and personalized diagnosis of diseases.

○ Research Outline

In order to enter mass production of devices for widespread sales to major market customers, the following research and development will be promoted to solve technical issues that are particularly in high demand from customers in terms of quality:

1. Improve discrimination performance and prevent variations in device performance during assembly and adjustment processes in mass production.
2. Reduce the impact of external environmental changes and component degradation due to long-term use, and improve long-term reproducibility.
3. Enhance usability, such as expanding optional functions to meet diverse customer needs.

Additionally, plans are underway to expand the research and development space for mass production and work towards reducing manufacturing costs.

Business Area/Field	Research Period	Research Grant Amount	International collaborative technology demonstration
Healthcare	DMP 2023~2025FY	JPY 1,047 million	North America, Asia

○ International collaborative technology demonstration

- Relationship development with potential local partner

Leveraging the expertise and production capabilities of overseas partners with extensive experience in developing and manufacturing products suited for the global market, we will carry out the design and development of the device and produce prototypes.