

## **Hitachi High-Tech Acquires Majority Interest in Nabsys** Transaction Strengthens the Molecular Research and Diagnostics Business by Providing Human Genome Analysis Solutions



OhmX

(The monitor shows an analysis image by Human Chromosome Explorer)

Tokyo and Providence, RI, August 1, 2024 – Hitachi High-Tech Corporation (Hitachi High-Tech) and Nabsys 2.0 LLC (Nabsys) announced today that Hitachi High-Tech has acquired a majority interest in Nabsys, a developer and manufacturer of instrumentation and consumables for the analysis of genomic structural variation. This transaction will make Nabsys a consolidated subsidiary of Hitachi High-Tech Group.

Hitachi High-Tech first invested in and formed an alliance with Nabsys in 2019 to fully realize the promise of genomics and improve human health through a scalable platform capable of interrogating structural variants (SVs). Through the support of Hitachi High-Tech, Nabsys has entered into a commercialization phase with the “OhmX Analyzer (OhmX)”; an electronic genome mapping platform for high-resolution SV analysis. By making Nabsys a consolidated subsidiary, Hitachi High-Tech group aims to accelerate the adoption of OhmX, and envisions the technology will substantively evolve to address critical diagnostic, prognostic, and therapeutic research gaps while promising to strengthening its molecular diagnostics business as part of its mission to create a society without fear of cancer and rare disease.

### **Background**

SVs are the dominant form of genomic variation and implicated in a wide array of disease states. Electronic genome mapping provides information that traditional cytogenetics and short-read sequencing do not fully cover and thus potentially improves the identification of SVs implicated in rare diseases. Further, identifying SVs might propel the identification of some oncogenic drivers, which are critical mutations promoting cancer initiation and progression.

Hitachi High-Tech and Nabsys have collaborated on SV analysis since 2019, with Nabsys focused on instrumentation and consumables and Hitachi High-Tech developing a cloud-based analytic suite called Human Chromosome Explorer (HCE). This has culminated in the OhmX system. OhmX uses a high signal-to-noise electronic detection methodology in which solid-state nanochannels measure the shapes of long DNA molecules traveling at high speeds. OhmX's use of electronic detection keeps the instrument footprint small (about the size of a desktop computer) and the cost of SV analysis low. When combined with HCE, the system captures and visualizes SVs at small enough length scales to be complimentary to short-read sequencing, with reads long enough to capture large structural rearrangements.

## **Future Developments**

In addition to strengthening Nabsys' development and production, Hitachi High-Tech will combine the platform with its data analysis technology to scale and expand electronic genome mapping globally.

Hitachi High-Tech's healthcare business states its purpose as "Innovating Healthcare, Embracing the Future", and by integrating diagnosis, therapy and the digital, we are working to create healthcare innovations that support optimization of healthcare across the board, including high-quality, highly functional in-vitro diagnosis and minimally invasive radiation therapy. We will continue to contribute to improving quality of life for people around the world by supporting the provision of personalized medical care for each and every patient.

## **Messages from Management**

Hitachi High-Tech Vice President and Executive Officer, and General Manager, Healthcare Business Group Yoshimitsu Takagi

Hitachi High-Tech is currently working to strengthen its molecular diagnostics business, which is centered around genetic testing. By combining Nabsys' genome mapping technology with Hitachi High-Tech's HCE, we aim to build unique solutions that contribute to the research of cancer and undiagnosed diseases, and aid in the development of diagnostic methods.

Furthermore, by making Nabsys a consolidated subsidiary, Hitachi High-Tech Group will be able to make maximum use of the human resources, knowledge, and technology of both companies, and will expand its genome mapping-related business globally.

Nabsys CEO Barrett Bready

Hitachi High-Tech has had a long and successful history in genomics. Their vision of ameliorating disease and suffering through technology aligns closely with Nabsys' mission.

We're thrilled that the electronic genome mapping platform that the Nabsys team has developed will be able to contribute to achieving that vision.

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## **About Hitachi High-Tech**

Hitachi High-Tech, headquartered in Tokyo, Japan, is engaged in activities in a broad range of fields, including manufacture and sales of clinical analyzers, biotechnology products, radiation therapy systems, semiconductor manufacturing equipment, analytical instruments, and analysis equipment. Also, we provide high value-added solutions in industrial fields such as mobility, connected, environment and energy, etc. Through business based on our core Observation, Measurement and Analysis technologies, we will contribute to the realization of a sustainable society by solving social issues. The company's consolidated revenues for FY2023 were approx. JPY 670.4 billion.

For further information, visit <https://www.hitachi-hightech.com/global/en/>

## **About Nabsys**

Based in Providence, Rhode Island, Nabsys employs a multidisciplinary team of specialists, including scientists, engineers and other professionals devoted to advancing genomic analysis. The Nabsys mission is to advance the understanding of disease, increase diagnostic yield, and improve patient outcomes by enabling routine, accurate, cost-effective analysis of genomic structural variation.

For more information, visit the Nabsys website at <https://nabsys.com/>.

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