BostonGene and Hokkaido University Hospital Collaborate to Develop Novel HER2 Protocols for Breast Cancer

WALTHAM, Mass, September 19, 2023 - BostonGene today announced an agreement with Hokkaido University Hospital to drive the discovery, validation and implementation of a groundbreaking stratification protocol for HER2-positive breast cancer patients.

Located in Sapporo, Japan, Hokkaido University Hospital stands as one of the most prominent medical institutions in the country. Affiliated with Hokkaido University School of Medicine, the hospital offers both high-quality patient care and cutting-edge medical research with an international perspective. As an academic hospital, it is also committed to the mentorship and development of upcoming medical professionals through expansive training programs.

Conventional HER2-targeted antibodies, such as trastuzumab and pertuzumab, fall short in treating patients with HER2-low breast cancer. However, recent clinical trials have demonstrated that trastuzumab-deruxtecan, an antibody-drug conjugate targeting HER2, benefits these patients. Additional data are required to elucidate the best approach for identifying HER2-low patients likely to benefit from the novel therapy. A growing interest lies in the RNA-based method, which can simultaneously investigate the tumor microenvironment and HER2 expression levels. This collaboration aims to demonstrate the benefits of the methodology that interrogate the impacts of the tumor immune ecosystem on HER2-targeted therapy. In this study, BostonGene will apply its genomics pipeline to reveal key tumor drivers, including immune microenvironment properties and genomic biomarkers of response to diverse therapies. In addition, the BostonGene-developed unique and robust machine learning algorithm named Kassandra will digitally reconstruct the tissue tumor microenvironment and cellular composition to identify distinct cell populations. The joint research will be led by Professors Ichiro Kinoshita, MD, PhD at the Division of Clinical Cancer Genomics/Department of Medical Oncology and Masato Takahashi, MD, PhD at the Department of Breast Surgery, Hokkaido University Hospital.

"We are excited to enter into this partnership with BostonGene to fully understand the molecular profiles of our patients. BostonGene's comprehensive solutions have the potential to deliver breakthrough discoveries and help us identify novel treatment approaches," said Ichiro Kinoshita, MD, PhD.

"Breast cancer ranks as the primary cause of cancer in women across the country. Enhancing treatment outcomes remains a critical focus. Through the findings of this research, we aim to advance technologies that offer more precise medical care and minimize the recurrence of breast cancer in as many patients as possible," said Masato Takahashi, MD, PhD.

"We're honored to partner with Hokkaido University providing our AI-based molecular and immune profiling to uncover treatable targets to personalize therapy for breast cancer patients," said Nathan Fowler, MD, Chief Medical Officer at BostonGene. "This collaboration supports our mission to equip doctors in finding the most effective treatment options for their patients."

BostonGene, NEC Corporation and Japan Industrial Partners recently announced the formation of BostonGene Japan Inc., a Tokyo-based joint venture to advance personalized medicine and dramatically improve patient outcomes. The company will utilize BostonGene's high-complexity molecular technology and advanced biocomputational algorithms to accelerate the development and validation of novel precision medicine approaches.

BostonGene will participate in the 82nd Annual Meeting of the Japanese Cancer Association (JCA) at Pacific Convention Plaza Yokohama from September 21 to September 23. Please contact Erin O'Reilly to learn more or to schedule a meeting.

About BostonGene Corporation
BostonGene's mission is to power healthcare's transition to personalized medicine using AI-based molecular and immune profiling to improve the standard of care, accelerate research, and reduce overall cost of cancer care. BostonGene's tests reveal key drivers of each tumor, including immune microenvironment properties, actionable mutations, biomarkers of response to diverse therapies, and recommended therapies. Through these comprehensive analyses, BostonGene's tests generate a personalized roadmap for therapeutic decision-making for each cancer patient. For more information, visit BostonGene at http://www.BostonGene.com.

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