BD, Hamilton Collaborate to Standardize Single-Cell Multiomics Experiments Using Robotics

Companies to automate a critical step of high-throughput single-cell multiomics experiments

FRANKLIN LAKES, N.J., Jan. 23, 2024 /PRNewswire/ -- BD (Becton, Dickinson and Company) (NYSE:BDX), a leading global medical technology company, announced a collaboration agreement with Hamilton, a leading global manufacturer of laboratory automation technology, to develop automated applications together with robotics-compatible reagent kits to enable greater standardization and reduced human error when conducting large-scale single-cell multiomics experiments.

As a result of the collaboration, BD aims to deliver a suite of BD Rhapsody™ Single-Cell Analysis Library Preparation Reagent Kits that can be performed on the Hamilton Microlab® NGS STAR™ robotic liquid-handling platform. The combination will automate steps, including pipetting and thermal cycling, to produce DNA samples or "libraries" that are ready for genetic sequencing.

In single-cell multiomics experiments, constructing libraries of fragmented genetic information that can be read by sequencing instruments is an essential first step before next-generation sequencing (NGS) can be performed and insights from cells can be gathered. NGS library preparation is historically a time-intensive process with manual steps that can result in inconsistent results and compromised data quality.

"Multiomics-based assays are increasingly used by single cell researchers in the fields of oncology, immunology and other disciplines to help investigate the various layers of information on a single cell and access a deeper view of health and disease, which is why ensuring reproducible results is critical," said Steve Conly, worldwide president at BD Biosciences. "By integrating Hamilton's robotic technology into our end-to-end portfolio of single-cell multiomics solutions, BD continues to leverage automation so that more researchers — whether academic, biopharmaceutical, or contract research organization— are empowered to perform larger scale single-cell multiomics studies with confidence."

Matt Hamilton, Vice CEO at Hamilton added, "Through this collaboration with BD, we aim to deliver a complete solution for researchers that reduces the potential for biases and enables greater throughput so that labs can achieve their results with greater reliability. As more researchers adopt the rapidly evolving and important approach of single-cell multiomics, we believe that having automated solutions for high-throughput experiments will serve to accelerate their potentially life-changing discoveries."

The BD Rhapsody™ Single-Cell Analysis Library Preparation Reagent Kits and Hamilton Microlab® NGS STAR™ applications will be developed and released in phases starting in 2024.

About BD
BD is one of the largest global medical technology companies in the world and is advancing the world of health by improving medical discovery, diagnostics and the delivery of care. The company supports the heroes on the frontlines of health care by developing innovative technology, services and solutions that help advance both clinical therapy for patients and clinical process for health care providers. BD and its more than 70,000 employees have a passion and commitment to help enhance the safety and efficiency of clinicians' care delivery process, enable laboratory scientists to accurately detect disease and advance researchers' capabilities to develop the next generation of diagnostics and therapeutics. BD has a presence in virtually every country and partners with organizations around the world to address some of the most challenging global health issues. By working in close collaboration with customers, BD can help enhance outcomes, lower costs, increase efficiencies, improve safety and expand access to health care. For more information on BD, please visit bd.com or connect with us on LinkedIn at www.linkedin.com/company/bd1/, X (formerly Twitter) @BDandCo or Instagram @becton_dickinson.

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