

BD, Hamilton collaborate to standardise single-cell multi-omics experiments using robotics

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

BD (Becton, Dickinson and Company), a US-based medical technology company, has 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 standardisation 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.

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.