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QIAGEN supports Singaporeâ??s National Precision Medicine programme with sample prep and next-gen sequencing technologies

November 3, 2026 | News

Project marks QIAGENâ??s first deployment of universal Next-Generation Sequencing technologies for a population genomics initiative



QIAGEN has announced that its QIAsprint Connect and QIAseq FX DNA Library Kit will support automated DNA extraction and library preparation for the SG-INSIGHT study, a cohort under Phase III of Singapore's National Precision Medicine (NPM) programme, as part of a consortium led by Singapore-based precision oncology company Lucence alongside Ultima Genomics.

Coordinated by Precision Health Research, Singapore (PRECISE), NPM Phase III expands Singapore's national precision medicine effort to about 450,000 residents—around 10% of the Singapore resident population—with a shift towards enrolling participants who are receiving medical treatment and healthcare services.

Unlike Phase II, which focused on healthy volunteers, Phase III includes patients across a wide spectrum of health conditions through Singapore's three public healthcare clusters, supporting the longer-term goal of moving genomics from research cohorts towards integration into clinical workflows and national healthcare delivery.

QIAGEN will provide an automated, single-source sample-to-library workflow designed to support data consistency from biological intake to downstream analysis.

Marking its first national-scale deployment, QIAsprint Connect automates genomic DNA extraction for high-throughput applications and can perform two automated runs of up to 96 samples each from a single start command, delivering a peak capacity of more than 3,600 samples per week. Built-in barcode checks help prevent setup errors, while automated audit trails and run reports strengthen traceability and compliance. Its compact footprint and high functional density bring high-throughput automation into less bench space, helping laboratories scale their operations efficiently.

Following DNA extraction, the QIAseq FX DNA Library Kit provides library preparation for sequencing on Ultima Genomics' UG200 platform. Its all-in-one reaction minimises sample transfers and consumable tip usage.

The SG-INSIGHT project expands QIAGEN's involvement in large-scale population genomics initiatives globally. It is the first time its universal next-generation sequencing products are being deployed in a nationwide population genomics study.

The SG-INSIGHT sequencing work brings together QIAGEN's sample preparation technologies with sequencing services delivered through the Lucence-led consortium. Lucence provides programme management and laboratory execution, while Ultima Genomics provides high-throughput sequencing technology through its UG200 platform and Solaris 2.0 chemistry.