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Illumina selected to help bring precision medicine into everyday healthcare in Singapore

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SG-INSIGHT study will extend whole-genome sequencing to nearly one in 10 Singapore residents, generating evidence to inform how precision medicine could be implemented in Singaporeâ??s healthcare system

Illumina has announced it has been selected to provide whole-genome sequencing services for the SG-INSIGHT study, a cohort under Phase III of Singapore's National Precision Medicine (NPM) programme. Expected to include approximately one in 10 Singapore residents, or around 450,000 individuals, the study is designed to generate evidence from genomic and health data to help inform preventive approaches to healthcare.

The study marks an important and planned transition from studying genomics primarily in healthy volunteers to studying those with a broad range of medical conditions. By connecting genomic information with real-world health data, SG-INSIGHT aims to better understand disease and treatment responses, support the responsible introduction of genetic screening in Singapore's public healthcare system, and help healthcare become more tailored to individuals over time.

"Singapore is showing what the future of precision medicine can look like at national scale," said Jacob Thaysen, Chief Executive Officer of Illumina. "By bringing genomic information closer to everyday healthcare, this programme has the potential to advance understanding of disease, generate evidence that support more informed care decisions, and ultimately move healthcare toward earlier, more precise intervention. We are proud to bring Illumina's technology, expertise and longstanding presence in Singapore to help make that vision possible."

"Phase III builds on nearly a decade of precision medicine in Singapore," said Professor Patrick Tan, Executive Director of PRECISE. "By extending the programme to patients across the public healthcare system, SG-INSIGHT aims to deepen understanding of how genetic, lifestyle and environmental factors are associated with health and disease. Phase III reflects Singapore's ambition to build a trusted and sustainable precision health ecosystem grounded in the needs and diversity of its population."

Illumina will perform the sequencing in Singapore through its local genomics facility, where scientific, laboratory and bioinformatics teams will oversee sample preparation, sequencing and genomic data analysis. Co-located with Illumina's manufacturing and R&D operations, the facility will seek the necessary accreditation and comply with Singapore's Healthcare Services Act 2020 (HCSA), strengthening its commitment to quality, safety, regulatory compliance and biomedical innovation.

Illumina's selection for the SG-INSIGHT study was awarded through an international competitive tender. It builds on an existing multi-year engagement, through which Illumina supported the successful implementation and delivery of NPM Phase II, PRECISE-SG100K, covering more than 100,000 genomes from healthy volunteers.

“For nearly two decades, Singapore has been one of Illumina’s most important centres for innovation, manufacturing and talent in Asia Pacific,” said Nilesh Shah, Head of Region, Asia Pacific, Illumina. “Our long-standing relationship with PRECISE represents the next chapter in that commitment—combining Singapore’s leadership in precision health with Illumina’s local genomic capabilities and regional expertise. We remain committed to investing in the people, technology and partnerships that can help advance genomics responsibly in Singapore and across the region.”

Illumina established its presence in Singapore in 2008. Today, Singapore serves as the company’s Asia Pacific regional headquarters and one of its largest hubs outside the United States, with more than 1,700 employees across three locations. Illumina operations in Singapore encompass commercial operations, manufacturing and R&D, supporting global research and innovation across sequencing platforms, software and emerging technologies.