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Illumina unveils NovaSeq X Series to accelerate human genomic discoveries

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New technology enables the highest levels of accuracy at an immense scale, with the power to sequence more than 20,000 genomes per year

Illumina, a global leader in DNA sequencing and array-based technologies, has launched the NovaSeq™ X Series (NovaSeq X and NovaSeq X Plus), new production-scale sequencers to accelerate genomic medicine.

The revolutionary new technology, NovaSeq X Plus can generate more than 20,000 whole genomes per year – 2.5 times the throughput of prior sequencers – greatly accelerating genomic discovery and clinical insights.

“we are forging a new path forward to advance more breakthroughs in cancer and genetic disease treatments, precision therapies, and pandemic preparedness. This groundbreaking technology will empower researchers, scientists, and clinicians in diagnosis and treatment while making genomics more sustainable and accessible” said Francis deSouza, Illumina's Chief Executive Officer.

XLEAP-SBS™ follows new sequencing by synthesis (SBS) chemistry, engineered for 2x higher speed and accuracy. It develops highest-resolution optics and ultra-high density flow cells, delivering 2.5x greater throughput while driving down sequencing costs. Furthur, integration of on-board DRAGEN™ Bio-IT with ORA compression, enables highly accurate and fully automated secondary analysis with 5x lossless data compression.

The new system creates 15 new thermostable reagents, supporting ambient-temperature shipping, eliminating the need for dry ice and reducing waste

“I strongly believe NovaSeq X Series will accelerate our path towards the $100 genome. This will enable us to deliver a genetic blueprint to everyone in the world to unlock individual potential and increase life quality – hence the company's slogan: 'Humanizing genomics’ said Professor Jeongsun Seo, Chairman of Macrogen.