Extended genomics portfolio, 2/16

Illumina launched its MiniSeq Sequencing System and, during a presentation at the J.P. Morgan Healthcare Conference, Jan. 11–14 in San Francisco, introduced the Infinium XT and previewed Project Firefly, which will lead to the commercialization of a new semiconductor-based sequencing system.

MiniSeq, a flexible benchtop sequencer with push-button operation, enables a broad range of DNA and RNA sequencing applications, from examining single genes to entire pathways, in a single run. The research use only system is designed as part of a complete sequencing solution that enables researchers to get results quickly with an easy-to-use, library-to-results workflow and onboard data analysis for numerous assays. The sequencer is also able to stream sequencing data to BaseSpace, Illumina's cloud and on-site genomics computing environment. Compatible with a full suite of Illumina library preparation solutions, and end-to-end support from Illumina scientists and engineers, it is an ideal NGS workflow solution for many applications commonly performed by molecular biologists, translational researchers in oncology, and molecular pathologists. The system will begin shipping in the first quarter of 2016.

Infinium XT is Illumina's highest throughput array format to date. The 96-sample BeadChip offers laboratories the ability to perform genotyping on larger numbers of samples, testing up to 50,000 markers per sample and enabling laboratories to scale up to one million samples or more per year. This solution is ideally suited for agrigenomics applications and will enable human applications, particularly for biobanks and personalized medicine initiatives with large-scale targeted genotyping. Infinium XT will begin shipping in the third quarter of 2016.

Illumina also previewed Project Firefly, an NGS sequencing system. The platform will offer customers a low capital cost, plug-and-play installation, and will take users from purified DNA to answers. The stackable two-module system will minimize hands-on time for both library preparation and sequencing. The first module will prepare eight normalized samples in parallel on a library preparation cartridge. A separate cartridge for sequencing, loaded into the second module, will deploy a one-channel version of Illumina's sequencing-by-synthesis chemistry on a semiconductor chip. Sequencing data will seamlessly move to BaseSpace for analysis. The system, with a raw error rate of less than one percent, has an output of approximately 1.2 G per run. The platform will be ideal for numerous markets including academic research, oncology, infectious disease, inherited disease, and reproductive health. Commercialization is expected in the second half of 2017.

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