



## **Complete Genomics Presents First Human Sequencing Data at AGBT; Plans to Sequence Five Genomes for Broad**

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Newsletter:

**MARCO ISLAND, Fla.** – Complete Genomics said this week that it has signed up the Broad Institute of Harvard and MIT to test its human genome sequencing services in a pilot project. The company, which plans to sequence a million human genomes over the next five years, also presented — for the first time — data from a human genome that it sequenced in house as a proof of concept.

Starting in June, Complete Genomics plans to offer a \$5,000 commercial human genome sequencing service to genome centers, research institutes, and companies, following a series of pilot projects in the coming months.

Last night at the Advances in Genome Biology and Technology conference here, Complete Genomics Chairman, President and CEO Cliff Reid presented results from a HapMap sample that the company completed sequencing last month.

Using its proprietary sequencing-by-probe-ligation technology ([see \*In Sequence\* 10/7/2008](#)), Complete Genomics sequenced a Caucasian HapMap sample to 91-fold coverage, generating 630 gigabases worth of short-read paired-end sequence data in nine instrument runs, which take eight days each. Using internally developed alignment software, company researchers were able to map approximately 250 gigabases of the data to the National Center for Biotechnology Information's human reference genome, covering about 92 percent of the genome.

They called approximately 3.3 million SNPs, about 400,000 of which are novel, as well as about 400,000 small insertions and deletions. In a comparison of those SNPs with a set of high-quality SNPs previously determined by microarray technology, they found the accuracy of their assembly to be better than 99.99 percent.

The company is making the data publicly available through its website and has submitted the sequence reads and base quality scores to NCBI. Later, it hopes to publish the results in a peer-reviewed journal.

By the end of this year, Complete Genomics plans to sequence 1,000 human genomes, and 20,000 next year. It is currently building a production genome center in Mountain View, Calif., that is scheduled to be completed this summer. By the time of its service launch this summer, the company plans to increase the output per sequence run to 200 gigabases, and to 600 gigabases by the end of the year. Its data center will host 5,000 processors and 5 petabytes of disk space initially, which will increase to 60,000 cores and 30 petabytes of storage next year.

Under the agreement with the Broad Institute, signed earlier this week, Complete Genomics will sequence five human genomes. It is also currently sequencing five human genomes for the Institute for Systems Biology under a partnership established last year ([see In Sequence 11/4/2008](#)).

Going forward, Complete Genomics plans to provide human genome sequencing services to large genome centers, research centers, and direct-to-consumer companies.

Over the next five years, the company plans to build approximately 10 genome centers across the world in conjunction with partners, and to sequence a million human genomes.