PacBio to Expand Apps for SMRT Platform; Initial Focus on Cancer, Infectious Disease Sequencing

September 22, 2009

By Julia Karow

*This article, originally published Sept. 21, has been updated from a previous version to include additional information from a company official.*
**Pacific Biosciences** said this week that it plans to focus on cancer and infectious diseases as initial application areas for its single-molecule real-time sequencing platform, noting that these areas are best suited to take advantage of the system's long reads and short cycle time.

In preparation for the full commercial launch of its instrument during the second half of 2010, the company has begun to build a sales force, and to scale up in the areas of manufacturing and operations.

PacBio is also working on additional applications for its SMRT analysis platform, to be introduced over time, including methylation sequencing, direct RNA sequencing, and protein translation.

The firm further disclosed that it is collaborating with six early-access customers, including Monsanto and the Scripps Institute, on a variety of sequencing projects. It will soon finalize the list of institutions that will receive an early commercial version of its SMRT sequencer during the first half of next year, which will likely include Monsanto and large academic genome centers.

At the UBS Global Life Sciences conference in New York this week, PacBio CEO Hugh Martin said that the company plans to focus initially on sequencing applications in cancer and infectious disease research, where it sees the strongest differentiation from its competitors.

The platform's long reads — expected to be at least 1,500 bases at launch next year — are especially sought after by cancer researchers, he said, and its short run time, or cycle time, of 15 minutes makes it attractive for infectious disease applications that require a fast answer.

At the moment, Martin said, the company has six collaborations underway that cover a variety of sequencing projects, including candidate variant discovery, agricultural biology, medical sequencing for cancer, and infectious diseases. Collaborators include three genome centers, two academic centers, and one company, which he later identified as Monsanto, an investor in PacBio's last funding round.

Also among the collaborators is Nicholas Schork's team at the Scripps Institute in San Diego, which uses PacBio data to study drug-resistant bacteria, according to PacBio Vice President of Marketing Martha Trela.

During the first half of next year, the company plans to ship on the order of 10 instruments — an early version of the commercial platform — to a number of institutions. Trela told *In Sequence* last week that the firm plans to "finalize the list" of these customers within the next couple of months. Monsanto is "very interested in being a customer," she said, and the firm "will be in discussions with big genome centers about their level of interest and criteria for those test sites."

In terms of customer types, Martin said the company will first concentrate on large genome centers and academic institutions, followed by pharmaceutical companies and "smaller individual customers," and finally on clinical diagnostics customers.

The company has already helped researchers with 45 grant applications that mention PacBio's platform "as the preferred piece of hardware," he said, and the firm believes it will be able to benefit from stimulus funding.

However, Martin cautioned that there are "only so many instruments" PacBio can manufacture next year and in 2011, and said that it will need to "think about customer diversity" so not all instruments go to one type of customer, such as genome centers.

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