



Pacific Biosciences and Invitae to Develop Ultra-High-Throughput Clinical Whole Genome Sequencing Platform

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New platform expected to make whole genome sequencing significantly more affordable and accessible for use in mainstream medical care

MENLO PARK, Calif., Jan. 13, 2021 (GLOBE NEWSWIRE) -- Pacific Biosciences of California, Inc. (Nasdaq: PACB), a leading provider of high-quality, long-read sequencing platforms, today announced a multi-year collaboration with Invitae Corporation (NYSE: NVTA), a leading medical genetics company, to begin development of a production-scale high-throughput sequencing platform leveraging the power of PacBio's highly accurate HiFi sequencing to expand Invitae's whole genome testing capabilities.

"Whole genome sequencing has the ability to significantly improve diagnosis for a wide range of diseases and guide healthcare throughout life. This collaboration is aimed at developing the technology to make it affordable and accessible to all patients who can benefit from in-depth, full genome information," said Sean George, co-founder and Chief Executive Officer of Invitae. "Our work with PacBio to date has demonstrated the increased diagnostic yield and clinical utility of using information from high-quality, long-read genomes to guide patient care. We believe this world-class sequencing technology combined with our clinical capabilities will uniquely position us to deliver those benefits cost effectively at scale. We look forward to working with the PacBio team to develop a new generation of innovative whole genome-based offerings."

Identifying the many underlying genetic influences on human health is becoming increasingly critical to overall clinical care and prognosis and whole genome sequencing offers the most comprehensive view of medically relevant variations. As whole genome sequencing continues to grow into a preferred method for genetic testing, it is expected by the Global Alliance for Genomics and Health that by 2025 as many as sixty million genomes will be sequenced. With the development of a new sequencing platform, Invitae and PacBio aim to enable a new class of cost-effective assays that could be used to accelerate the accessibility of a more comprehensive whole genome sequencing approach in areas including carrier screening, immune system response, and other heritable diseases.

"Invitae is a leader in medical genetic testing and has driven innovation in this area for more than a decade. We are excited to join forces to develop and implement this new platform which is built on our shared vision that broad access to whole genome sequencing in the clinic has the power to improve diagnosis and access to precision therapies," said Christian Henry, President and Chief Executive Officer of Pacific Biosciences. "Building on the proven performance of our HiFi sequencing, we believe that this new system will ultimately enable us to deliver the most clinically relevant whole genome at substantially less than \$1,000 which we believe is a critical price threshold needed to expand adoption in routine medical care."

PacBio HiFi sequencing combines the high accuracy of Sanger sequencing (>99.9%) with long reads up to 25 kb. Together, the length and accuracy of HiFi reads provide excellent detection of variants from single nucleotide changes to large structural variants, even in hard-to-sequence regions of the genome.

Through the collaboration, both companies will commit significant resources to support development of a production-scale sequencing platform designed with the capacity to process clinical whole genomes at scale. Those resources are expected to include talent, technology and collaborative oversight, and Invitae will also invest capital to support development throughout the multi-year effort.

About Pacific Biosciences

Pacific Biosciences of California, Inc. (NASDAQ: PACB) is empowering life scientists with highly accurate long-read sequencing. The company's innovative instruments are based on Single Molecule, Real-Time (SMRT®) Sequencing technology, which delivers a comprehensive view of genomes, transcriptomes, and epigenomes, enabling access to the full spectrum of genetic variation in any organism. Cited in thousands of peer-reviewed publications, PacBio® sequencing systems are in use by scientists around the world to drive discovery in human biomedical research, plant and animal sciences, and microbiology. For more information, please visit www.pacb.com and follow [@PacBio](https://twitter.com/PacBio).

PacBio products are provided for Research Use Only. Not for use in diagnostic procedures.

About Invitae

Invitae Corporation (NYSE: NVTA) is a leading medical genetics company whose mission is to bring comprehensive genetic information into mainstream medicine to improve healthcare for billions of people. Invitae's goal is to aggregate the world's genetic tests into a single service with higher quality, faster turnaround time, and lower prices. For more information, visit the company's website at invitae.com.

Pacific Biosciences Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including, among other things, statements relating to market leadership, uses, accuracy, quality or performance of, or benefits of using, Pacific Biosciences' products or technologies, including HiFi technology; the expected benefits, suitability or utility of Pacific Biosciences methods, products or technologies for particular applications or projects, including for whole genome sequencing; the benefits of whole genome sequencing; market estimates; the ability to provide whole genome sequencing for less than \$1,000; the resources to be committed by Pacific Biosciences to the new sequencing platform; the ability of the parties to achieve the goals and realize the expected benefits of the collaboration; and other future events. You should not place undue reliance on forward-looking statements because they involve known and unknown risks, uncertainties, changes in circumstances and other factors that are, in some cases, beyond Pacific Biosciences' control and could cause actual results to differ materially from the information expressed or implied by forward-looking statements made in this press release. Factors that could materially affect actual results can be found in Pacific Biosciences' most recent filings with the Securities and Exchange Commission, including Pacific Biosciences' most recent reports on Forms 8-K, 10-K and 10-Q, and include those listed under the caption "Risk Factors." Pacific Biosciences undertakes no obligation to revise or update information in

this press release to reflect events or circumstances in the future, even if new information becomes available.

Invitae Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including statements relating to the quality of Pacific Biosciences' technology; the benefits of whole genome sequencing; market estimates; the contributions of Invitae to the collaboration; and the ability of the parties to achieve the goals and realize the expected benefits of the collaboration. Forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially, and reported results should not be considered as an indication of future performance. These risks and uncertainties include, but are not limited to: Invitae's history of losses; Invitae's ability to compete; Invitae's failure to manage growth effectively; Invitae's need to scale its infrastructure in advance of demand for its tests and to increase demand for its tests; Invitae's ability to use rapidly changing genetic data to interpret test results accurately and consistently; security breaches, loss of data and other disruptions; laws and regulations applicable to Invitae's business; the impact of litigation on Invitae's business; and the other risks set forth in Invitae's filings with the Securities and Exchange Commission, including the risks set forth in Invitae's Quarterly Report on Form 10-Q for the quarter ended September 30, 2020. These forward-looking statements speak only as of the date hereof, and Invitae Corporation disclaims any obligation to update these forward-looking statements.

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