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PACBIO AND BLUEBEE LAUNCH *DE NOVO* GENOME ASSEMBLY PIPELINE ON THE BLUEBEE ANALYSIS PLATFORM

RIJSWIJK, The Netherlands and MENLO PARK, Calif., — October 9th, 2017 — Bluebee, a company driving genomic data-driven medicine, and Pacific Biosciences of California, Inc. (NASDAQ:PACB), the leader in long-read sequencing, announced they have integrated the PacBio® *de novo* assembly pipeline onto the Bluebee® genomics analysis platform. The integration creates a simplified workflow and fully automated, end-to-end data analysis solution that allows assembly of any size genome, including the human genome. Bluebee's platform provides a user-friendly environment that does not require specialized bioinformatics knowledge. The solution will be launched next week at the American Society of Human Genetics (ASHG) annual meeting in Orlando, FL.

"We are continually looking at ways we can help people get more knowledge and insights from their genomic data, and this integration of the PacBio *de novo* assembly pipeline on the Bluebee genomics analysis platform offers precisely that: an end-to-end solution with a guaranteed turn-around time, enabling better planning and improved productivity," said Hans Cobben, CEO of Bluebee. "This will address the data analysis burden that many people are

faced with, and add both value and convenience to any users of the PacBio de Novo Assembly Pipeline.”

Since parameters can be adjusted within the platform, users can redefine the pipeline, creating a starting point for further pipeline developments and optimizations to fit the purpose of specific use cases.

“With the continuing demand for Single Molecule, Real-Time (SMRT®) Sequencing in the genomics community, we are delighted to see this new cloud-based analysis option become available to users of PacBio data,” said Kevin Corcoran, Senior Vice President of Market Development for PacBio. “The end-to-end solution integrates downstream data analysis in Bluebee’s high-security and regulatory-compliant compute centers for PacBio customers around the world.”

It is now established that most genomes have high sequence complexity, encompassing many repetitive elements, copy number variants, and structural variants. Such complex elements are often very difficult, if not impossible, to resolve using short-read technologies.

SMRT Sequencing is the ideal tool to investigate these genetic complexities, due to its long reads with uniform coverage that allow comprehensive *de novo* genome assemblies and provide more complete and accurate views of all types of genomic variations. Despite the power of SMRT Sequencing, however, *de novo* assembly of large genomes still remains a challenge requiring, among other things, very powerful compute resources.

The Bluebee platform was designed with confidential sample information in mind, and thus employs a multi-layered data security approach to ensure an environment that covers the strictest of security controls. The Bluebee platform data centers are compliant with all applicable security and regulatory standards. The compliance standards Bluebee adheres to include:

ISO 27001:2013, HIPAA, IGT (NHS, UK), C-Star Level 1, PHIPA & PIPEDA (Canada) and EU Model Clauses (for regional data storage and processing).

About Bluebee

Bluebee offers a global bio-informatics platform to process, analyze, share and store genomics data.

With a private cloud service, Bluebee supports users in clinical diagnostics, therapeutics and research with advanced analytics for genomic data driven medicine.

Designed for cross-functional teams of clinicians and life science researchers the Bluebee platform effectively centralizes and manages genomics data processes and storage. Bluebee's multi-layered security is designed to meet both specific organizational and regulatory data protection requirements when analyzing and storing research or clinical grade data.

Local data processing is guaranteed via "*Data Residency Control*" in state-of-the-art data centres. The service is available across all major European countries and US cities, as well as in Canada and Asia Pacific.

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About Pacific Biosciences

Pacific Biosciences of California, Inc. (NASDAQ:PACB) offers sequencing systems to help scientists resolve genetically complex problems. Based on its novel Single Molecule, Real-Time (SMRT®) technology, Pacific Biosciences' products enable: de novo genome assembly to finish genomes in order to more fully identify, annotate and decipher genomic structures; full-length transcript analysis to improve annotations in reference genomes, characterize alternatively spliced isoforms in important gene families, and find novel genes; targeted sequencing to more comprehensively characterize genetic variations; and real-time kinetic information for epigenome characterization. Pacific Biosciences' technology provides high accuracy, ultra-long reads, uniform coverage, and the ability to simultaneously detect epigenetic changes. PacBio® sequencing systems, including consumables and software, provide

a simple, fast, end-to-end workflow for SMRT Sequencing. More information is available at www.pacb.com.

Forward-Looking Statements

All statements in this press release that are not historical are forward-looking statements, including, among other things, statements relating to future uses, quality or performance of, or benefits of using, products or technologies, the suitability of products or technologies for particular applications 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.

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