Pacific Biosciences to Support Sequencing of California Species for the Earth BioGenome Project

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Company will sponsor sequencing and assembly at UC Davis to produce reference-grade genomes for several ecologically important organisms in the state of California

MENLO PARK, Calif. and DAVIS, Calif., Feb. 25, 2020 (GLOBE NEWSWIRE) -- The Earth BioGenome Project (EBP) and Pacific Biosciences of California, Inc. (Nasdaq:PACB), a leading provider of high-quality sequencing of genomes, transcriptomes and epigenomes, today announced that PacBio will support the sequencing of ecologically important organisms in the state of California through the EBP. The effort will be centered at the University of California, Davis.

Launched in 2018, the EBP aims to sequence the DNA of all the planet's eukaryote biodiversity, some 1.5 million known species, over a period of 10 years. Currently, fewer than 4,500 – or about 0.3 per cent of all known eukaryotic species – have had their genome sequenced, with approximately 100 at reference quality.

PacBio will sponsor the sequencing for several of these organisms, including terrestrial and marine invertebrate species important to the biodiversity of California, such as the Western pygmy blue butterfly, one of the smallest butterflies in the world and the smallest in North America, and the Pacific blood star, an iconic California sea star with an enigmatic distribution and a representative of a genus of sea stars that appears to be less sensitive to the devastating wasting disease outbreak along the West Coast. In order to provide scientists with reference-grade genome assemblies for these organisms, the UC Davis Genome Center, a world-class facility for genomics research and training, will use the PacBio Sequel II System to generate HiFi reads, which provide highly accurate, long-read sequence data.

"There is growing evidence that sequencing with PacBio long HiFi reads provides powerful datasets for generating reference-grade assemblies," said Harris Lewin, PhD, Distinguished Professor at UC Davis and chair of the EBP. "We are grateful to PacBio for supporting these important conservation efforts and we look forward to producing genomic resources that will be invaluable not only for California-based scientists but also for scientists around the world."

Often only a single, fragmented draft genome is available for a species, genus, or even family, which limits the potential for conservation and ecological research efforts investigating genetic diversity, evolution and the impact of changing environments. By producing high-quality genome assemblies, scientists can pinpoint problems that may, for example, be accelerating a species' path to extinction and use that information to guide breeding and other programs for more successful outcomes.

Jonas Korlach, PhD, Chief Scientific Officer at PacBio, commented: "It is an honor to support the generation of high-quality reference genomes for organisms that are vital to our home state of California. PacBio has a long and successful track record of working with major genome sequencing programs, such as the EBP-affiliated Vertebrates Genome Project and the Darwin Tree of Life Project, and we are eager to help advance the EBP's ambitious goals as well."

To learn more about the EBP, please visit www.earthbiogenome.org.

About The Earth BioGenome Project

The Earth BioGenome Project (EBP) is a confederated network of partner organizations and affiliated projects that have a common goal of sequencing and annotating the genomes of all 1.5 million known species of eukaryotes on the planet in 10 years. The EBP aims to create a digital backbone of sequences from the tree of life that will serve as critical infrastructure for biology, conservation, agriculture, medicine, and the growing global bioeconomy. During its inaugural year, the EBP has established a foundation that will carry it toward completion of Phase I of the project – the sequencing of a representative species of each of the approximately 9,300 known eukaryotic taxonomic families of plants, animals, protozoa, fungi, and other microbes in the next three years. For more information please visit www.earthbiogenome.org/

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 availability, uses, accuracy, quality or performance of, or benefits of using, products or technologies, the suitability or utility of products or technologies for particular applications or projects, the expected benefits of the Earth BioGenome Project (EBP) 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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