



PacBio Announces Revio, a Revolutionary New Long Read Sequencing System Designed to Provide 15 Times More HiFi Data and Human Genomes at Scale for Under \$1,000

October 26, 2022

Significant Advances in SMRT Cell Design, Compute, and a New System Architecture Will Enable Revio to Dramatically Increase Throughput and Lower Cost While Leveraging the Power of HiFi for Exceptional Accuracy and Direct Methylation Detection

MENLO PARK, Calif., Oct. 25, 2022 /PRNewswire/ -- [PacBio](#) (NASDAQ: PACB), a leading developer of high-quality, highly accurate sequencing solutions, today announced the Revio™ long-read sequencing system, which will enable customers to dramatically scale their use of PacBio's celebrated HiFi sequencing technology. Revio is designed to provide customers with the ability to sequence up to 1,300 human whole genomes per year at 30-fold coverage for less than \$1,000 per genome. With this scale and pricing, PacBio believes Revio will enable the use of HiFi sequencing for large studies in human genetics, cancer research, agricultural genomics, and more.



"Our customers have transformed genomics with the power of HiFi sequencing. Revio will further unleash that power by adding high throughput and affordability," said Christian Henry, President and Chief Executive Officer of PacBio. "We've designed an entirely new SMRT Cell with three-fold higher density than our existing SMRT Cell 8M, resulting in 25 million ZMWs. Revio will run up to four SMRT Cells in parallel, which provides up to 100 million ZMWs for sequencing single molecules simultaneously. Combined with significant advances in our compute, Revio will deliver shorter run times and a 15-fold increase in HiFi data. I'm excited to see what researchers can discover using the power of Revio."

Scientists have achieved many 'firsts' with HiFi sequencing on PacBio's Sequel IIe sequencing system – the first complete telomere-to-telomere assembly of a human genome (Nurk 2022), the first haplotype-resolved methylomes in a rare disease cohort (Cheung 2022), the first population surveys of structural variation with long reads (*All of Us* Research Program), the first single-cell full isoform catalogs (Al'Khafaji 2021), and the first complete assembly of the highly complex oat genome (European Seed 2020). Revio uses the same groundbreaking HiFi chemistry – producing accurate native long reads with uniform coverage, extraordinary application performance for variant calling and assembly, and accurate DNA methylation detection – but at a much larger scale.

Revio will be PacBio's first system to feature state-of-the-art NVIDIA GPUs, providing a 20-fold increase in computing power compared to the Sequel IIe. In addition to providing accelerated basecalling to meet Revio's higher throughput, the AI-enabled compute will integrate deep learning algorithms to detect DNA methylation from standard sequencing libraries, and DeepConsensus, a deep learning method developed with Google Health to improve the yield and accuracy of HiFi sequencing.

Revio will require 50 percent fewer consumables than the Sequel IIe and includes substantial improvements in workflow and convenience. Revio will make it possible to set up a subsequent run while the current run is in progress, which provides increased schedule flexibility for an operator to load runs any time of day and maximize system throughput.

"In our Genomic Answers For Kids (GA4K) program, HiFi genome sequencing shows true advancement beyond contemporary genetic analysis in

unsolved rare disease samples," said Tomi Pastinen, MD, PhD, Director of the Genomic Medicine Center at Children's Mercy Kansas City. "Increased throughput of the Revio sequencing system at lower cost would accelerate answers in GA4K."

"The new Revio sequencing system from PacBio will be a key component in our genomics toolbox at Corteva. Long-read sequencing has enabled the characterization of complex plant genomes and now the high-throughput capabilities of Revio will allow us to apply HiFi technology to a wider array of applications in agricultural biotechnology," said Gina Zastrow-Hayes, Biotechnology and GT-Genomics Technology Manager at Corteva Agriscience.

Revio has a list price of US \$779,000. PacBio is now accepting orders and intends to begin delivery in the first quarter of 2023.

PacBio has also posted a presentation to its website with additional details about Revio. Interested parties can access the presentation on PacBio's Investor Relations website, [here](#) and product information [here](#).

About PacBio

Pacific Biosciences of California, Inc. (NASDAQ: PACB) is a premier life science technology company that is designing, developing and manufacturing advanced sequencing solutions to help scientists and clinical researchers resolve genetically complex problems. Our products and technology under development stem from two highly differentiated core technologies focused on accuracy, quality and completeness which include our existing HiFi long read sequencing and our emerging SBB™ short read sequencing technologies. Our products address solutions across a broad set of research applications including human germline sequencing, plant and animal sciences, infectious disease and microbiology, oncology, and other emerging applications. For more information, please visit www.pacb.com and follow @PacBio.

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

Forward-Looking Statements

This press release contains "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and the U.S. Private Securities Litigation Reform Act of 1995. All statements other than statements of historical fact are forward-looking statements, including without limitation statements relating to: future availability, uses, accuracy, advantages, quality or performance of, or benefits or expected benefits of using, PacBio products or technologies, including the Revio sequencing system; customers' ability to scale HiFi sequencing through the use of Revio; throughput, affordability, coverage, run times, data, density, cost per genome, pricing, number of genomes that can be sequenced per year, and the areas of study that can be explored using Revio and SMRT Cells; the use of NVIDIA GPUs and AI-enabled compute in Revio and related improvements in yield and accuracy; the use of fewer consumables required when using Revio; schedule flexibility and downtime; expected delivery timeframe, and other future events. Readers are cautioned not to place undue reliance on these forward-looking statements and any such forward-looking statements are qualified in their entirety by reference to the following cautionary statements. All forward-looking statements speak only as of the date of this press release and are based on current expectations and involve a number of assumptions, risks and uncertainties that could cause the actual results to differ materially from such forward-looking statements, including, among others, challenges inherent in developing, manufacturing, launching, marketing and selling new products, and achieving anticipated new sales; assumptions, risks and uncertainties related to the ability to attract new customers and retain and grow sales from existing customers; potential product performance and quality issues and potential delays in commercialization timelines; rapidly changing technologies and extensive competition in genomic sequencing that could make the products PacBio is developing obsolete or non-competitive; supply chain risks; successfully completing development of a product that is not yet commercially available; customers and prospective customers curtailing or suspending activities utilizing our products; the impact of U.S. export restrictions on the shipment of PacBio products to certain countries; and third-party claims alleging infringement of patents and proprietary rights or seeking to invalidate PacBio's patents or proprietary rights. Readers are strongly encouraged to read the full cautionary statements contained in PacBio's filings with the Securities and Exchange Commission, including the risks set forth in PacBio's Forms 8-K, 10-K, and 10-Q. PacBio disclaims any obligation to update or revise any forward-looking statements.

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The PacBio logo is displayed in a large, bold, magenta font. The word "PacBio" is written in a sans-serif typeface, with the "i" in "Bio" having a dot that is a solid magenta circle. The "o" at the end of "Bio" is a larger solid magenta circle.

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