

Investor Relations – Todd Friedman

Good afternoon and welcome to PacBio's fourth-quarter 2022 earnings conference call.

Earlier today, we issued a press release outlining the financial results we will be discussing on today's call, a copy of which is available on the Investor's section of our website at www.pacb.com or as furnished on Form 8-K available on the Securities and Exchange Commission website at www.sec.gov.

With me today are:

- Christian Henry, President and Chief Executive Officer, and
- Susan Kim, Chief Financial Officer

Before we begin, I would like to remind you that on today's call, we will be making "forward-looking statements," including statements regarding predictions, progress, estimates, plans, intentions, guidance, and others, including expectations regarding our Revio and Onso systems and their commercialization timeframes, the future availability, uses, accuracy, coverage, advantages, quality or performance of, or benefits or expected benefits of using, PacBio products or technologies, including our Revio and Onso systems. You should not place undue reliance on forward-looking statements because they are subject to assumptions, risks, and uncertainties that could cause our actual results to differ materially from those projected or discussed, including those inherent in developing and commercializing new products. We refer you to the documents that we file with the SEC, including our most recent Forms 10-Q and 10-K, and our recent press releases to better understand the risks and uncertainties that could cause actual results to differ. We disclaim any obligation to update or revise these forward-looking statements except as required by law.

During the call, we will also present certain financial information on a non-GAAP basis. Non-GAAP information is not prepared under a comprehensive set of accounting rules and should only be used to supplement an understanding of the company's operating results as reported under U.S. GAAP. Management believes that non-GAAP financial measures, combined with U.S. GAAP financial measures, provide useful information to compare our performance relative to forecasts and strategic plans and benchmark our performance externally against competitors. Reconciliations between historical U.S. GAAP and non-GAAP results are presented in tables within our earnings release. For future periods we are unable to reconcile the non-GAAP gross margin and non-GAAP operating expenses without unreasonable effort due to the items indicated in our earnings release.

In addition, please note that today's call is being recorded and will be available for audio replay on the Investor's section of our website shortly after the call. Investors electing to use the audio replay are cautioned that forward-looking statements made on today's call may differ or change materially after the completion of the live call.

Finally, we'll be hosting a question-and-answer session after our prepared remarks. We ask that analysts please limit themselves to one question only so that we can accommodate everybody in the queue.

I will now turn the call over to Christian.

Christian Henry, President and CEO

Good afternoon, and welcome to our fourth-quarter results and business highlights call. Thank you for joining us today.

We have a lot of exciting news to share, and I'll kick things off with an update on our performance in the fourth quarter and 2022. I'll then delve into some exciting developments we've seen in the past few months and wrap up with an update on our market segmentation. Susan will then provide a more in-depth look at our financial results and guidance.

But first, a quick recap on Revio – our most transformative long-read sequencer to date:

We are just a few weeks away from broad commercial availability of Revio scheduled for next month. Currently, we have dozens of instruments on the manufacturing floor in our Menlo Park facility and, at this point, we don't see any serious supply chain constraints. As a result, I expect that we'll ship at least 25 Revio Systems to customers prior to the end of the quarter. We will continue our manufacturing scale-up through the second quarter and I believe we will be at our planned production rate for 2023 by the end of Q2. This is good news as the Revio platform enables our customers to take on projects in the thousands to tens of thousands of samples. With this scale, we believe Revio will be a game-changer for scientists and clinical researchers. What would have taken years or even decades with long-read sequencing can now be completed in a fraction of the time and cost with the Revio system.

For years, the scientific community has relied on short-read genomes and exomes, yielding valuable insights into the human genome. However, despite millions of short-read genomes being sequenced much of the genome remains unactionable today and our understanding of our 20,000 plus genes and their role in driving disease is still quite limited.

Further, we now know that phenotype is not solely determined by genes, as mutations in non-coding regions can cause certain cancers. Our understanding of the impact of methylation on genetic disease is in its early stages, and we also recognize the importance of both sequence length and accuracy in understanding disorders caused by tandem repeat expansions.

It's clear that to better understand the human genome, researchers must be able to interrogate its full complexity with high accuracy. We expect that sequencing with the Revio platform will provide researchers with the most complete and accurate view of the genome in a single assay. With Revio, researchers will be able to interrogate the genome from telomere to telomere, obtain phasing information, structural variation, epigenetic profiles and, of course, single nucleotide variants- all at the scale and affordability required for large scale projects.

The early excitement around Revio and the immense possibility for genomics support our belief that we can grow our revenue towards our goal of a compound annual growth rate of 40-50% through 2026.

As we work to achieve our revenue growth targets, we see 2023 as a year of product transition. We expect many Sequel II and IIe users will migrate over to Revio over the course of the year. These transitions are difficult to precisely predict and as a result, we may see some temporary variability with respect to consumable revenue. On the instrument side of our business, we expect to see continued strength for Revio throughout the year. Additionally, we do expect to place a modest number of Sequel IIe systems and, of course, Onso, our short read sequencer, remains on track for commercial shipment in Q2 of 2023. As a result, our initial guidance for 2023 is that we expect to achieve between \$165 to \$180 million in revenue which represents growth from 29% to 40%.

Now, turning to our results. In the fourth quarter, PacBio achieved revenue of \$27.4 million, a 24% decrease compared to the previous year's quarter. The decline in revenue was primarily driven by the announcement of the launch of Revio in the fourth quarter, which impacted orders and shipments for Sequel IIe.

We delivered 18 Sequel IIe systems during the fourth quarter, bringing our total installed base to 512 Sequel II and IIe systems as of December 31.

However, what truly sets this past quarter apart is that we received orders for 76 Revio systems – a record-breaking start for a PacBio product launch, and far surpassing our expectations.

We have seen a growing excitement around the potential of Revio, as indicated by the positive feedback we have received from our customers. At the recent AGBT conference, many customers told us how Revio could help them scale their research and interrogate the genome at unprecedented levels. At the Plant and Animal Genome Conference in January, we saw a deep appreciation for the importance of HiFi sequencing and enthusiasm for higher output long-read sequencing in the community. We hosted a packed workshop where researchers from Corteva, UCLA, and HudsonAlpha discussed how PacBio sequencing advances their work in agrigenomics, biodiversity, and plant evolution.

We are thrilled to announce that the first early-access Revio is en route to researchers at the Broad Institute. Over the next few weeks, the team at the Broad Institute will perform their first internal sequencing runs on the platform and in March we expect to begin full commercial shipments. The Broad has already ordered ten Revio systems to scale long reads sequencing for programs like the NIH's All of Us program. To put that in perspective, 10 Revio systems has the equivalent sequencing power of 150 Sequel IIes. We look forward to supporting this project and more population-scale research initiatives to come.

While on the topic of All of Us, I wanted to discuss a recent preprint from researchers involved in the program which highlights the utility of long read sequencing. The authors noted that "HiFi reads produced the most accurate results for both small and large variants" and concluded that "long reads have widespread value for generating complete and accurate variant calls." The study also showed that PacBio is best-in-class for calling variants, even at lower coverage than other technologies. This supports our belief that even a PacBio genome at 10x coverage can be more than sufficient for many research projects. At 10x coverage, a Revio can sequence 12 human genomes in 24 hours, or almost 4,000 genomes per year, at a list price of approximately \$330 per genome, with methylation included.

The demand for highly accurate long reads is increasing, as evidenced by the recognition of long-read sequencing as Nature Methods "Method of the Year." With innovative studies utilizing PacBio's long reads from the Vertebrate Genome Project, Telomere-to-Telomere Consortium, and the Human Pangeome Reference Consortium, we believe Revio can drive further discovery with its enhanced throughput and cost-effectiveness.

Our existing customers have also recognized the potential of Revio to accelerate their research. For example, Mohammed Bin Rashid University of Medicine and Health Sciences, or MBRU, purchased Sequel IIes last year and ordered multiple Revios in the fourth quarter to sequence for a large scale research project in Dubai.

And the Wellcome Sanger Institute, a long-time user of PacBio for plant and animal research, now plans to increase its use of long reads in human applications such as single-cell transcriptomics and variant detection with the added power of Revio.

Moving forward to Onso, our beta program is in full swing with the Broad Institute, Corteva Agriscience, and Weill Cornell, each evaluating how Onso's extraordinary accuracy can benefit their various genomic applications. Feedback so far has been excellent, with one partner sharing that they've been extremely impressed by Onso's levels of accuracy and another saying how highly accurate reads will be transformative for many genomic applications, including oncology.

We are pleased to announce that we are on schedule to begin commercialization of Onso in the second quarter, with a launch specification of 400 million to 500 million reads and 200-cycle and 300-cycle kits. With an expected specification for accuracy of over 90% of bases at Q40+ and the potential to reach Q50+ through improved library preparation, we believe Onso will set a new standard in the industry. The system has a competitive list price of \$259,000, with the 300-cycle kit listed at \$1,995. We are collaborating with workflow partners across the short read ecosystem and will provide library prep conversion kits so that any current short read assay can move directly across onto the Onso platform.

Regarding its capabilities, we have validated Onso's performance through various testing methods, including the Seraseq cfDNA control with Agilent library prep and capture and our conversion kit. Internal results demonstrate that Onso is two times more sensitive in detecting variant allele frequency of 0.05% and has 1.4 times higher sensitivity even when applying duplex UMIs at four times the coverage compared to other short-read sequencing technologies on the market. These performance metrics highlight the exceptional value that Onso can bring to the market, offering high accuracy and sensitivity to meet the demands of various genomic applications, including cell free DNA research. In addition to cell free DNA, in collaboration with 10X Genomics, Onso achieved 99.8% bases at Q30 or better for single-cell RNA reads, showing the potential use of ultra-high accuracy in single-cell workflows.

We are dedicated to providing our customers with comprehensive and streamlined solutions for their sequencing workflows. This includes offering a range of tools and workflows that are designed to support their success, from automation to sample preparation and informatics.

Our recent initiatives include expanding our MAS-Seq program to support new assays on the Sequel II/IIe and Revio sequencing systems. These kits, which build on the success of last year's MAS-Seq concatenation technology for single-cell isoform sequencing, include 16S and bulk Iso-Seq and will be available later this year.

Additionally, our bioinformatics team is continuously improving interpretation tools, such as the recently launched Paraphrase tool that helps characterize the dark regions of the genome linked to spinal muscular atrophy.

On top of our internally developed products and tools, we're partnering throughout the ecosystem to make it more plug-and-play. As such, we recently introduced the PacBio Compatible program designed to make PacBio sequencing more accessible, which includes partners across all ends of the sequencing workflow, from automation and sample and library prep to secondary and tertiary analysis tools.

Moving on, I wanted to share an update on our market segmentation from the previous year.

In 2022, Human Genomics was the largest portion of our business, accounting for nearly 40% of our revenue. Customers in this segment include GeneDx, who recently ordered a Revio to target difficult-to-sequence genes and sequence human whole genomes for rare disease cases with previously inconclusive results. And Radboud University has leveraged PacBio technology to make numerous genetic discoveries and plans to ramp up from hundreds to thousands of genomes using Revio.

Beyond human applications, we expect Revio to be utilized in applied markets like plant and animal genomics, which made up about 25% of our revenue in 2022. In this market, customers like Corteva Agriscience are utilizing PacBio to

study plant genomes and identify microbial infectious diseases that affect these plants to improve crop yields and drive agricultural sustainability. Plant and animal genomics also includes research programs like the Darwin Tree of Life project, which recently celebrated sequencing its 500th HiFi genome. The program aims to sequence 70,000 species of eukaryotic organisms in Britain and Ireland, and we expect Revio to enable the researchers to progress toward this goal.

Additionally, infectious disease and microbiology, which represented approximately 20% of our revenue in 2022, includes customers like Bioengineering Lab who plans to use Revio for metagenomics to discover and characterize communities of microbes for industrial and biomedical applications.

About 10% of our 2022 revenue was from Oncology applications with PacBio's highly accurate long reads allowing researchers to uncover novel isoforms, fusions, and structural variants with exceptional accuracy. Looking ahead, we expect to address more of this large market with Onso's potential for extraordinary sensitivity in liquid biopsy applications.

The remaining portion of revenue comes from other and emerging applications, including gene editing and gene therapy applications.

Finally, we were pleased with the support and interest from investors in our equity raise last month. In an upsized offering, we raised \$201 million in gross proceeds, which will further bolster our ability to grow our business and drive toward our goal of positive cash flow in 2026.

With that, I'd like to turn the call over to Susan to discuss our financials and guidance in more detail.

Susan Kim, CFO

Thank you, Christian. As discussed, we reported \$27.4 million in product, service, and other revenue in the fourth quarter of 2022, which represented a decrease of 24% from \$36.0 million in the fourth quarter of 2021.

Instrument revenue in the fourth quarter was \$6.1 million, a decrease of 62% from \$16.2 million in the fourth quarter of 2021. The decline in revenue was primarily driven by the announcement of the launch of Revio in the fourth quarter, which impacted orders and shipments for Sequel IIe.

We delivered 18 Sequel IIe Systems during Q4, growing the installed base to 512 Sequel II and IIe systems as of December 31, 2022.

Turning to consumables, revenue of \$16.7 million in the fourth quarter grew 11% from \$15.0 million in the fourth quarter of last year and was a record for PacBio. Sequel II and IIe consumables represented approximately 94% of our total consumable revenue in the fourth quarter, with the rest from older systems and other consumables.

Annualized pull-through per system on the Sequel II and IIe installed base in the fourth quarter was approximately \$127 thousand. We expect Sequel II and IIe pull-through to decline throughout 2023 as we begin shipping Revio and customers transition to the new system.

Finally, service and other revenue was \$4.6 million in the fourth quarter compared to \$4.8 million in the fourth quarter of 2021.

From a regional perspective,

Americas revenue of \$12.0 million declined 36% compared to the fourth quarter of 2021, primarily driven by lower Sequel II/IIe placements with the recent announcement of the Revio launch.

Asia Pacific revenue of \$10.2 million grew 23% over the prior year. The region continued to recover with growth from both consumables and Sequel IIe system sales compared to the prior year period. With the launch of Revio, several customers also purchased the Revio/Sequel IIe bundle to progress their HiFi sequencing volume with plans to further expand upon the receipt of their first Revio.

Finally, EMEA revenue of \$5.2 million was 43% lower than the prior year period, also primarily driven by lower Sequel II/IIe placements. In addition, currency fluctuations in the pound sterling and euro drove a 7% headwind. In contrast, the region posted another record consumables quarter.

Moving down the P&L, GAAP gross profit of \$5.1 million in the fourth quarter of 2022 represented a gross margin of 19% compared to a GAAP gross profit of \$16.8 million in the fourth quarter of 2021 which represented a gross margin of 47%. Fourth-quarter 2022 non-GAAP gross profit of \$5.3 million represented a non-GAAP gross margin of 19%, compared to a non-GAAP gross profit of \$16.9 million or 47% in the fourth quarter of last year. GAAP and non-GAAP gross profit in the fourth quarter reflects loss on purchase commitments and adjustments for excess inventory totaling approximately \$7.1 million, primarily related to a faster-than-expected ramp in Revio demand, which resulted in a faster-than-expected decline in Sequel II/IIIe demand upon the launch of Revio.

GAAP operating expenses were \$92.2 million in the fourth quarter of 2022 compared to \$81.4 million in the fourth quarter of 2021. Non-GAAP operating expenses were \$87.6 million in the fourth quarter of 2022 representing a 10% increase from non-GAAP operating expenses of \$79.9 million in the fourth quarter of 2021. Increased GAAP and non-GAAP operating expenses primarily reflect higher sales and marketing-related expenses.

In terms of headcount, we ended the quarter with 769 employees compared to 771 at the end of Q3 2022 and 728 at the end of last year's fourth quarter.

Operating expenses in the fourth quarter included total non-cash share-based compensation of \$16.8 million, compared to \$17.5 million in the fourth quarter of last year.

GAAP net loss in the fourth quarter of 2022 was \$84.4 million, or 37 cents per share compared to a GAAP net loss of \$69.3 million in the fourth quarter of 2021 or 31 cents per share. Non-GAAP net loss was \$79.6 million representing 35 cents per share in the fourth quarter of 2022, compared to a non-GAAP net loss of \$66.4 million, representing 30 cents per share in the fourth quarter of 2021.

Now, turning to our Balance Sheet.

We ended the fourth quarter with \$772 million in unrestricted cash and investments, compared with \$834 million at the end of the third quarter of 2022. Our ending cash and investments exclude gross proceeds of approximately \$201 million resulting from the sale of shares of our common stock in a follow-on public offering in January 2023.

Inventory balances increased in the fourth quarter to \$50.4 million, representing 1.6 inventory turns, compared with \$43.5 million at the end of the third quarter of 2022, representing 1.9 inventory turns. The increase in inventory primarily reflects purchases of Revio and Onso instrument and consumables inventory.

Accounts Receivable decreased in the fourth quarter to \$18.8 million, reflecting a DSO of 70 days, compared with \$22.8 million at the end of the third quarter of 2022, reflecting a DSO of 71 days.

Moving to guidance

For the full year 2023, we expect revenue in the range of \$165 million to \$180 million, representing a growth rate of approximately 29% to 40% compared to 2022. The lower end of the range assumes that a reduction in Sequel II/IIe consumables from a faster-than-expected ramp-down more than offsets a ramp in Revio consumable revenue later in the year. The high end assumes consumable revenue is flat-to-slightly higher compared to 2022 and greater Revio shipments in the year. In both high and low ends of the range we expect service revenue to decline compared to 2022 as customers decommission their Sequel II and IIes.

For the first quarter of 2023, we expect to ship at least 25 Revio instruments as we build and ramp manufacturing capacity. We expect manufacturing capacity scale through the second quarter reaching our planned production rate for 2023 by end of Q2. Please note that with annual guidance in place, we do not expect to share instrument backlog or order numbers on a regular basis going forward.

Moving down the P&L, we expect 2023 non-GAAP gross margin to be between 36% and 40% which will exclude the amortization of intangible assets.. Lower margins result from a higher concentration of revenue weighted towards instruments with the early shipments of Revio at lower margin due to the combination of lower ASPs from customer loyalty discounts coupled with higher costs during a new platform launch.

We expect margin expansion beyond 2023 and maintain our long-term guidance of 55% to 60%+ in 2026.

We expect operating expenses to be in line with long term guidance, and therefore non-GAAP operating expenses will grow less than 5% in 2023 compared to 2022,

We expect the weighted average share count for EPS for the full year to be approximately 255 million shares, reflecting the recent sale of common shares and shares expected to be issued as part of the Omniome milestone later this year.

With that, I will turn the call back to Christian.

Christian Henry, President and CEO

Thank you, Susan. During last month's JP Morgan healthcare conference, I outlined our strategic goals for this year, focusing on delivering results to our stakeholders.

Our first priority is to drive widespread adoption of our Revio sequencer by converting existing Sequel II/IIe customers and attracting new PacBio customers. We're off to a strong start with 76 systems in our backlog as of year-end and approximately 30% of our sales pipeline consisting of new customers as of year-end.

Second, we aim to demonstrate the unparalleled accuracy of Onso in customers' hands and show its ability to transform research in several genomic applications. As discussed, our internal data shows that Onso's accuracy can detect variants at far greater depth than SBS and beta partners are sharing that they are having an excellent user experience.

Third, we're committed to continuing to develop our long-read sequencing technology, including ultra-high-throughput and benchtop systems and a next-generation SBB sequencer. This year marks the first step in our journey for offering multiple systems across the sequencing spectrum, with Revio and Onso leading the way.

Next, we will leverage the current infrastructure to drive toward positive cash flow. As Susan shared with our OpEx guidance, we are going to prioritize and focus our spending on the areas that matter most.

Finally, we plan to expand our partnerships across the ecosystem and workflow to increase customer adoption of SBB and HiFi. With the launch of the PacBio Compatible Program, we have a framework in place to onboard the best partners in the sequencing workflow.

Our long-term goal is to exceed \$500 million in revenue in 2026 and we believe that 2023 is the start of a multi-year growth story toward achieving this. I look forward to keeping you updated on our progress throughout the year.

With that, operator would you please start the Q&A portion of the call?