PacBio

43rd Annual J.P. Morgan Healthcare Conference

January 14, 2025

Christian Henry, President and CEO

Forward-looking statements

All statements in this presentation (and any accompanying oral presentation) that are not historical of fact are “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, including statements relating to our preliminary financial results as of and for the quarter and year ended December 31, 2024 as well as our expectations for future operating results, revenue, revenue mix, margins, guidance, goals and operating plans; expectations with respect to the commercial success of the Revio, Vega and Onso systems; expectations with respect to development and commercialization timeframes; future availability, uses, accuracy, sensitivity, advantages, compatibility, pricing, specifications, quality or performance of, or benefits or expected benefits of using, PacBio products or technologies, including the Revio, Vega and Onso systems; throughput, scalability, affordability, coverage, run times, data, density, type and cost per genome, pricing, consumable requirements, number of genomes that can be sequenced per year; and related improvements in yield and accuracy; schedule flexibility and downtime; references that PacBio is creating the world’s most advanced sequencing technologies; expected delivery timeframes; expectations regarding competition in the short-and long-read sequencing technologies markets; market sizes, market and revenue growth and market opportunities, as well as our ability to capture market share; expected use applications; expectations with respect to collaborations, partnerships and acquisitions, including our ability to realize the anticipated benefits thereof; 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 presentation 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; challenges related to the testing, validation and commercialization of our products; potential product performance and quality issues and potential delays in development and delivery timelines; assumptions, risks and uncertainties related to the ability to attract new customers and retain and grow sales from existing customers; rapidly changing technologies and extensive competition in genomic sequencing that could make the products PacBio is developing obsolete or non-competitive; supply chain risks; 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; regulatory uncertainty; third-party claims alleging infringement of patents and proprietary rights or seeking to invalidate PacBio’s patents or proprietary rights; and risks associated with macroeconomic and geopolitical conditions. 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, except as required by law.

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Our mission

Enabling the **promise** of **genomics** **to better human health**

Creating the world's most advanced sequencing technologies

PacBio

Portfolio expansion and expense reduction expected to set PacBio on a path to gain market share and improve our financial performance in 2025

Takeaways from today, PacBio is:

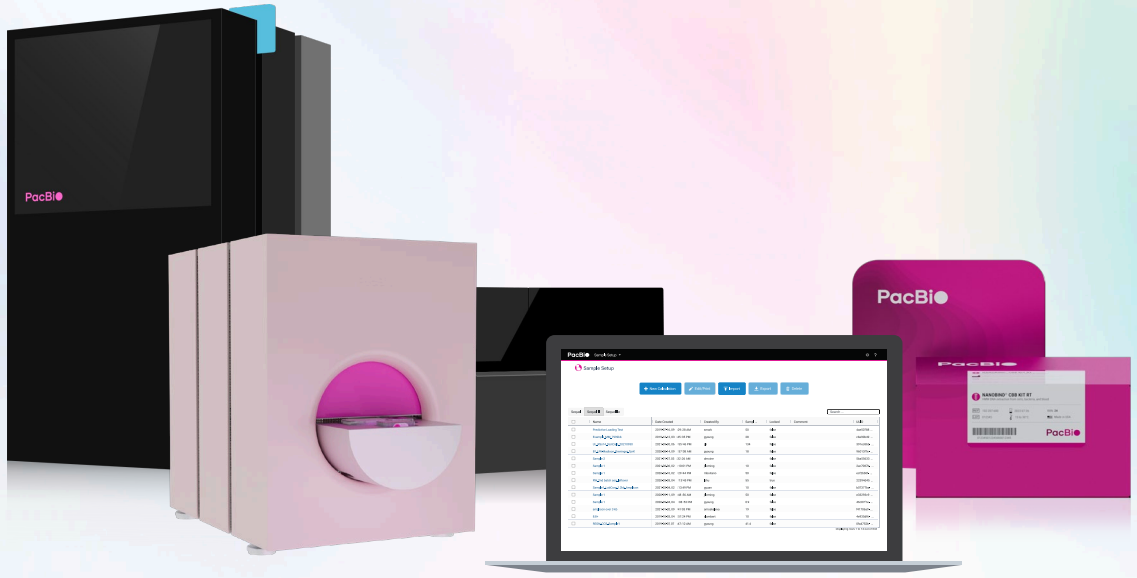
1. Continuing to drive innovation to achieve our long-term strategy of developing a multi-platform sequencing portfolio

2. Improving efficiency, reducing costs, and lowering cash burn

3. Focusing on opportunities in the clinical LDT market, such as genetic disease, carrier screening, and emerging HiFi applications

PacBio

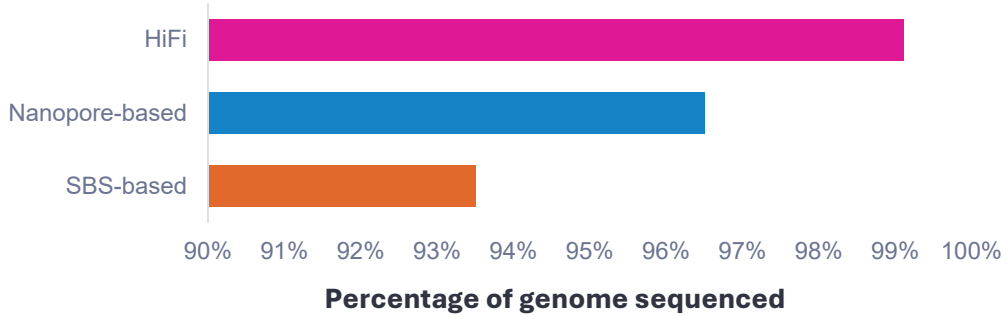
PacBio provides **highly accurate and complete sequencing technologies** across long- and short-read platforms



Instruments | Software/Informatics | Consumables

PacBio

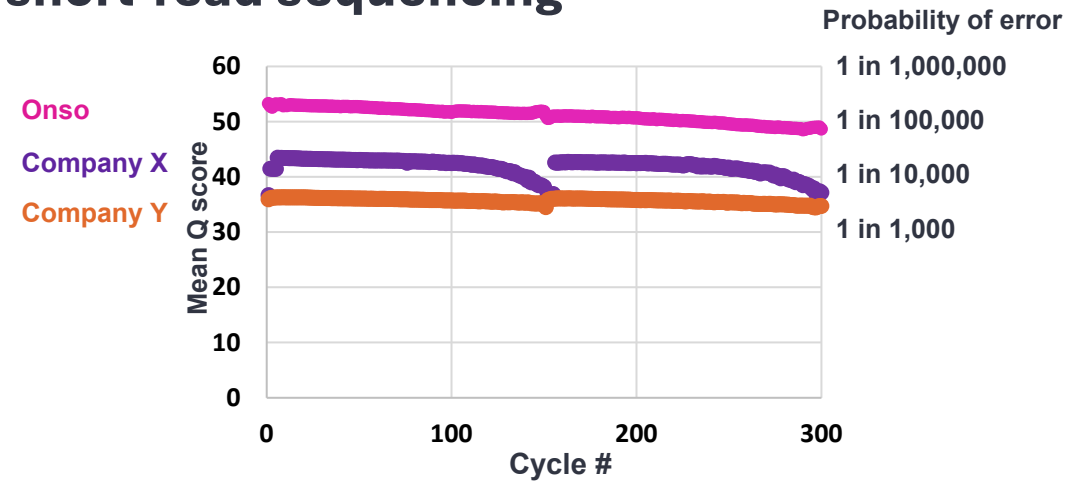
HiFi offers a near-complete view of the genome



Total estimated % of genome sequenced of the CHM13v1.0 T2T genome for each respective technology. Read length used for analysis was 250bp for SBS, 25kb for HiFi and 100kb for Nanopore. Table based on Nurk et al. 2022, table S14.

Onso offers best-in-class sequencing accuracy for short-read sequencing

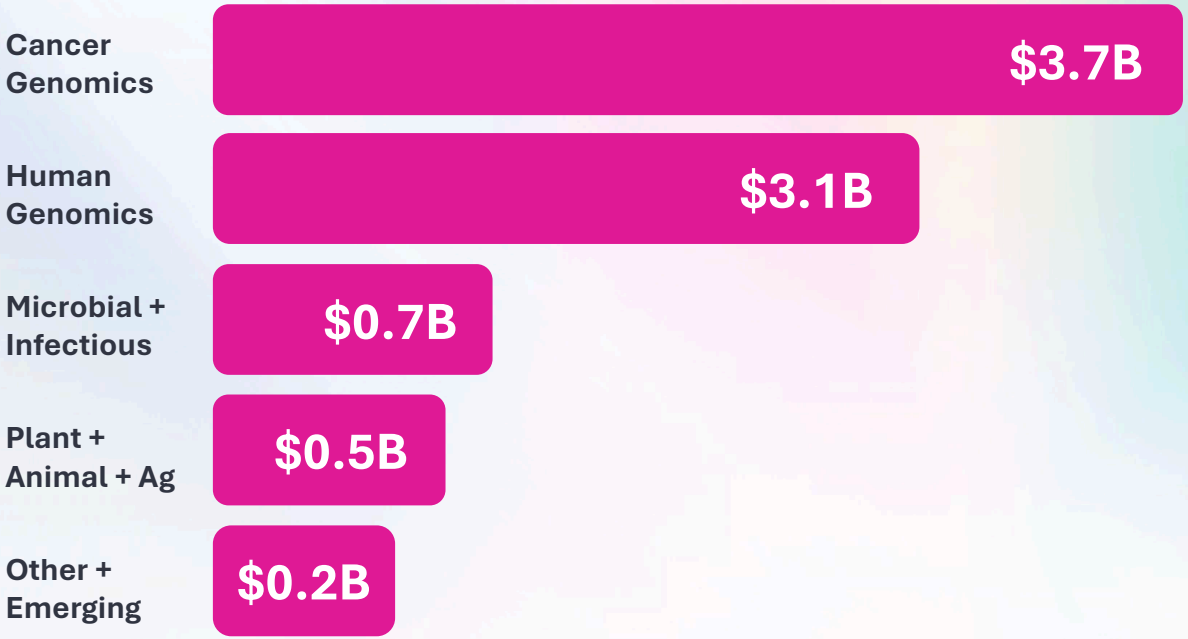
~85% of bases Q50+
100% of bases Q40+



Data from internal run for hg002, PCR-free library prep with 2x150bp run at 45X coverage. Datasets for other companies from publicly available dataset for hg002 sequenced on respective platforms.

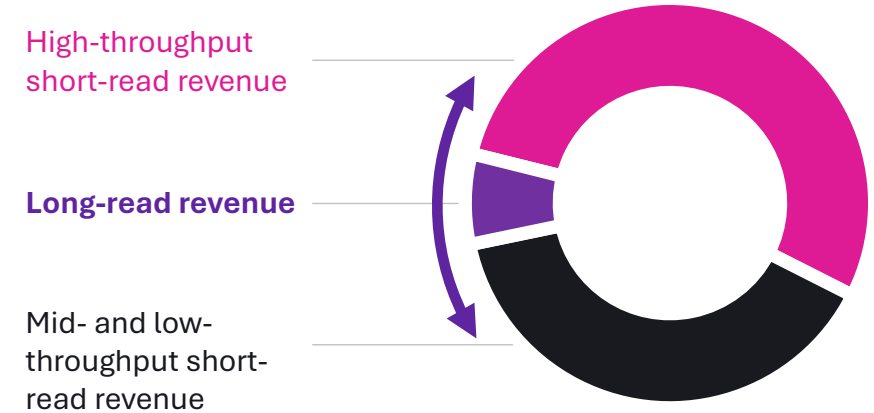
We participate in a large market expected to grow ~9% annually to >$8 Billion by 2027[1]

Approximate market size in 2027[1]



1. Based on Decibio 2024 NGS market report and internal estimates. Graph not drawn to scale

Growth in long-read has exceeded short-read over 4 years, demonstrating market expansion[2]



2. Based on 4-year revenue CAGR from 2020-2024 as compared to publicly-traded short read competitors' reported revenue and consensus revenue estimate for 2024. Graph not drawn to scale

Cited in **> 1,000 publications/pre-prints in 2024,** PacBio is setting standard for accurate + complete sequencing in multiple applications

Population health

An Emirati pangenome incorporating a diploid telomere-to-telomere reference
bioRxiv 2024.12.16.628631

Cancer

Successful classification of clinical pediatric leukemia genetic subtypes via structural variant detection using HiFi long-read sequencing
medRxiv 2024.11.05.24316078

Pediatrics

Long-Read Sequencing Increases Diagnostic Yield for Pediatric Sensorineural Hearing Loss
medRxiv 2024.09.30.24314377

Neurology

Single chromatin fiber profiling and nucleosome position mapping in the human brain
bioRxiv 2024.02.24.581862

Rare, undiagnosed disease

Unravelling undiagnosed rare disease cases by HiFi long-read genome sequencing
medRxiv. 2024;2024.05.03.24305331

RNA / Proteogenomics

Long-read proteogenomics to connect disease-associated sQTLs to the protein isoform effectors of disease
The American Journal of Human Genetics, Volume 111, Issue 9, 1914 - 1931

Using HiFi, these researchers…

Added **“~159.63 Mb of novel sequence [to the Emirati pangenome]**, offering valuable insights into the region's genetic landscape.”

Solved over 20% of a rare-disease cohort of previously unsolved cases that had used exome and short-read WGS in pediatric sensorineural hearing loss.

"…**found (likely) disease-causing genetic variants in 13.0% of previously unsolved families** and additional candidate disease-causing SVs in another 4.3% of these families."

2024 preliminary results[1]

$154.0M
Preliminary 2024 revenue

$39.2M
Preliminary Q4 2024 revenue

+11%
Consumable revenue growth vs 2023

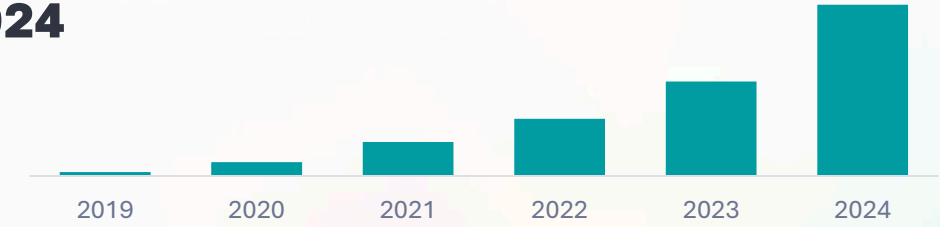
97
Revio systems in 2024 with ~45% to new customers

~$390M
Cash and investments balance as of 12/31/2024

1. Unaudited, preliminary estimate as of or for the period ended 12/31/2024 and subject to change

81% growth in data in 2024

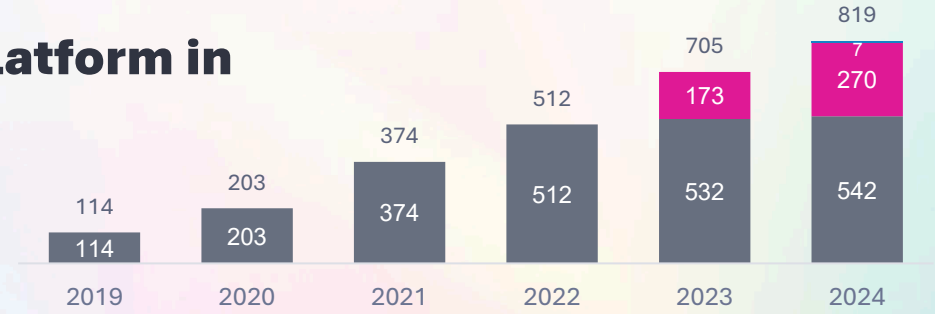
Total petabase output from PACB sequencers; > 42x more than five years ago



Annual output from PacBio sequencers (petabases)

Revio: fastest growing platform in PacBio history

Commenced Vega benchtop shipments in the fourth quarter of 2024

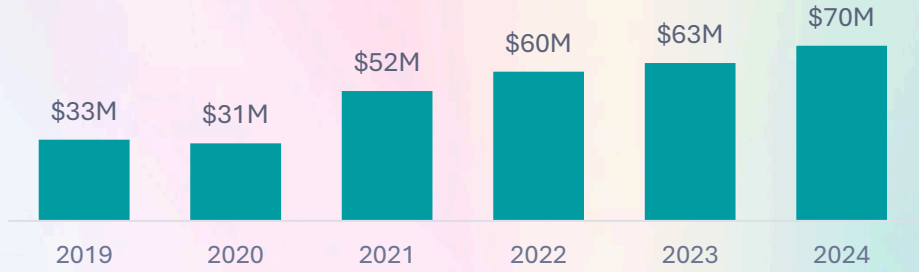


Sequel II/IIe Revio Vega

Cumulative shipments (installed base)

Record consumable revenue in 2024

With annualized Revio pull-through of ~$240K in the fourth quarter of 2024

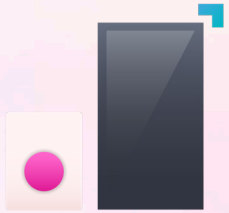


Consumable revenue (in $ millions)

Core strategy is to offer an end-to-end portfolio of highly accurate short-read and long-read sequencing technologies across a range of throughput options addressing the entire sequencing market

Sample prep

Library prep



Sequencing

Analysis

Nanobind PanDNA
(1H24)

Expanded sample types and improved automation of high molecular weight DNA prep.

HiFi Plex Prep Kit 96
(1H24)

Allows Revio customers to prepare up to 96 libraries at a time at lower cost per library.

Pure Target Kit
(1H24)

Enables comprehensive analysis of 20 genes associated with serious neurological disorders, including challenging-to-sequence genes with tandem repeat expansions.

SPRQ Chemistry
(2H24)

Increased throughput enabling Revio users to sequence up to 2,500 HiFi genomes/year at a cost < $500/genome. Reduced DNA input requirement 4-fold.

Vega Benchtop
(2H24)

Long-read platform designed to make HiFi sequencing more affordable and accessible.

SMRTLink Cloud
(1Q25)

Customers can access, store, and analyze HiFi data without local hardware, making it easier for customers to ramp up their sequencing.

PacBio

Revio®

with SPRQ chemistry

Our most scalable and economic long-read platform

500ng input

Lower DNA Input, more samples

4x reduced input per human WGS
Same library prep as today

<$500

Per human genome

Up to 2,500 human genomes/year

5mC + 6mA

Complete multiomic insights

10% increase in 5mC accuracy
6mA compatible with Fiber-seq assay

120Gb

Increased output, reduced costs

33% increase vs on-market

PacBio

VEGA

Benchtop platform
loaded with innovation

Designed to address market need of 1,000s of existing benchtop sequencing customers with an addressable market of >$1 billion annually

Powered by the same **SMRT cell technology** used in Revio

Affordable: Instrument priced at $169K and consumables at $1,100

Turnkey: On-board Deep Consensus, 5mC calling, and demultiplexing + compatible with Kinnex and PureTarget kits

Flexible: 12 or 24-hour run times with multiple read length settings and up to 60Gb output per run

2025 priorities - Revenue growth and gross margin expansion driven by:

Enabling the **full-scale release of Vega** to broaden reach in market

Investing in **future product launches** to diversify offerings

Accelerating samples onto the Revio platform via SPRQ chemistry and application kits

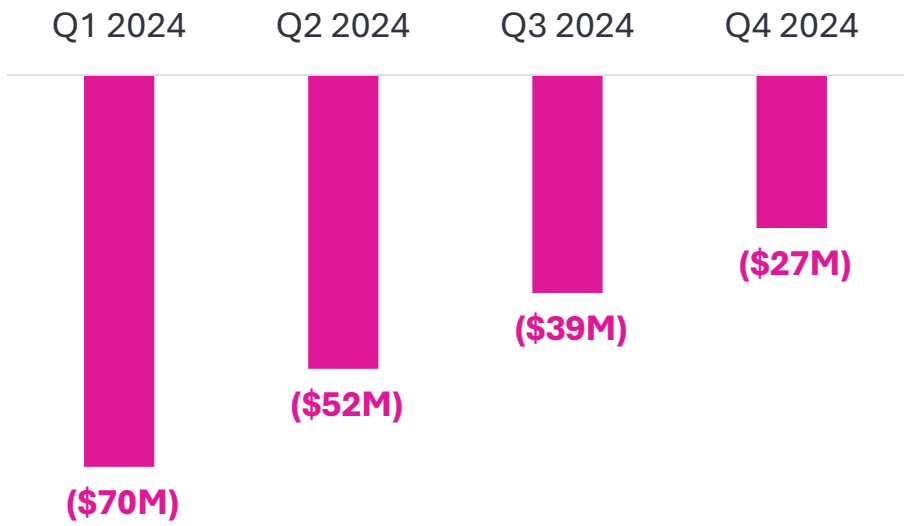
Progressing our **clinical strategy** to improve outcomes and create durability

PacBio

Improving PacBio's financial position

- Reduced non-GAAP annualized operating expense run rate by over $75 million
- Convertible note exchange reduced debt by $259 million and extended maturity of 2028 notes by ~18 months
- Reduced reporting layers, improved time-to-market for new products
- Reduced cash burn and ended with ~$390 million in cash and investments

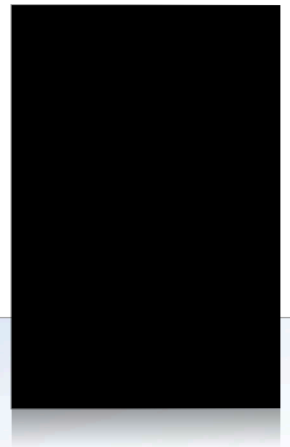
Adjusted quarterly cash burn[1]



[1]Net change in cash/investments based on unaudited, preliminary estimate as the period ended 12/31/2024 and subject to change; excludes ~$54M in Q4 2024 in connection with note exchange with SoftBank

Executing on plan to offer a suite of highly accurate short-read and long-read sequencing technologies across a range of throughput options to address the entirety of the sequencing market

Launched three platforms in the last two years



Population scale HiFi

In development

Revio

On market since 2023

Vega

On market since 2024

Onso

On market since 2023

Billions of Q40+ reads

In development – Pilot samples 2H 2025

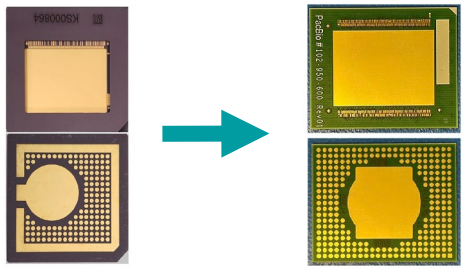
HiFi sequencing — *SBB sequencing*

PacBio

Multiple technologies in development to improve on-market and future platforms to expand margins and increase throughput

Higher density ZMW SMRT Cell

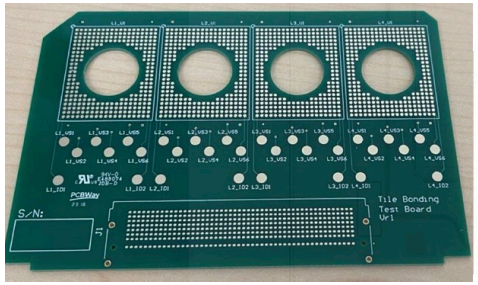
Expected to improve cost and throughput with limited increase in COGS



25M SMRT Cell

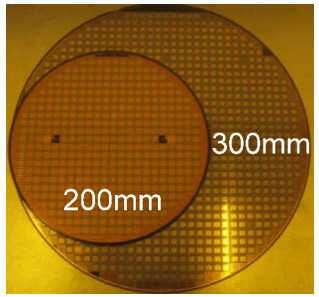
New SMRT cell formats

Automation-friendly for handling off-instrument



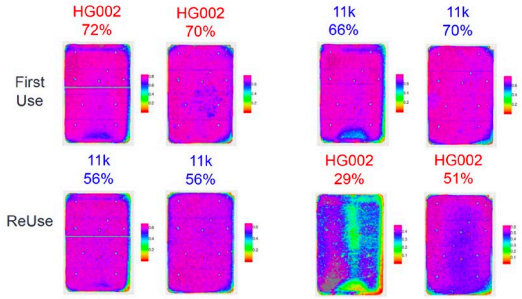
300mm wafer from 200mm

Expected to enable lower COGS on SMRT Cells



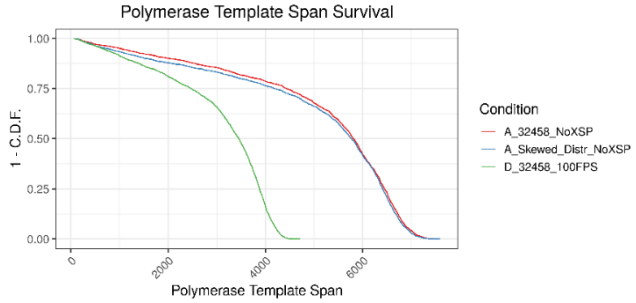
SMRT Cell reuse

Enables new, lower cost formats



Faster chem + frame rate

Faster chemistry can lower run times and increase max output of systems



Improved genome analysis

Improved variant calling and interpretation methods can provide better answers

DeepVariant

paraphase

jasmine

TRGT

HiFi Whole genomes and long-read targeted gene panels are increasingly being used in LDT and clinical research settings

Quest Diagnostics™

Leveraging Revio to support development of tests for neurological disorders based on advantages of PacBio's PureTarget repeat expansion panel.

Myriad genetics®

Using Revio + PureTarget to develop a high-throughput, automated, targeted panel and consolidate current methods (PCR, capillary electrophoresis) for a subset of genes in its carrier screening test.

BIOSCIENTIA

Using Revio, launched a clinical long-read whole-genome sequencing test to diagnose patients with sensory and other monogenic disorders.

Radboudumc university medical center

Implementing long-read sequencing in 2025 as first-tier workflow for germline-based testing to diagnose rare disease, with the ultimate goal of replacing all other diagnostic workflows.

JCVI J. CRAIG VENTER INSTITUTE®

Plans to sequence thousands of human genomes over the next few years to improve genetic testing for genetically diverse populations and in women's and reproductive health.

BerryGenomics 贝瑞基因

Early access customer and partner for Vega system. Anticipates leveraging the platform to develop distributable clinical tests for genetic diseases.

Commitment to sequence 5,000 HiFi genomes following **success in identifying genetic causes** of rare diseases

"Our results show that LRS has the potential to be implemented as a first-tier diagnostic workflow for germline testing, potentially replacing all current tests for diagnosing individuals with rare disease."

Dr. Christian Gilissen

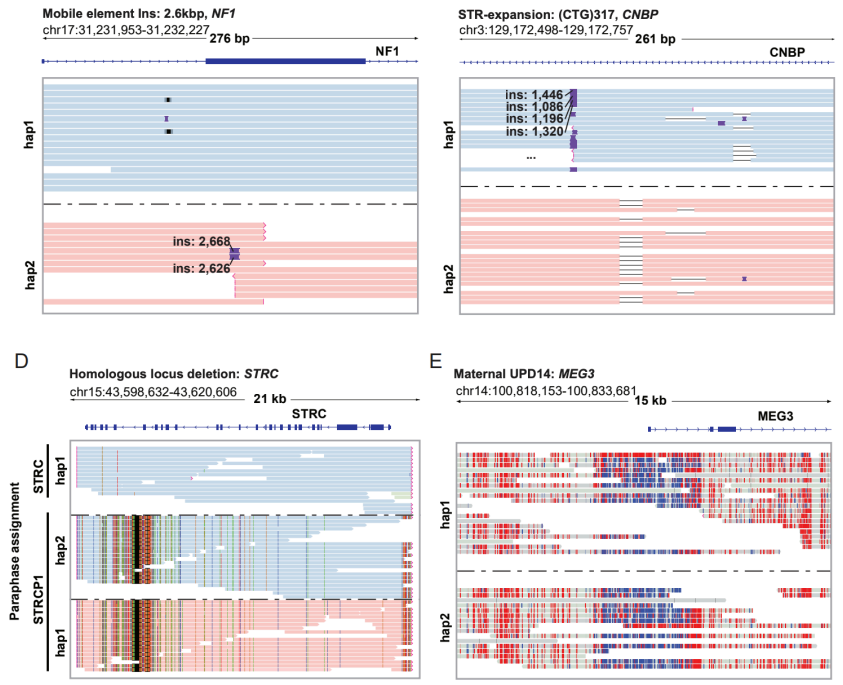
Radboudumc
university medical center

PacBio

REPORT

HiFi long-read genomes for difficult-to-detect, clinically relevant variants

Wolfram Höps,[1,2,6] Marjan M. Weiss,[1,2,6] Ronny Derks,[1,2] Jordi Corominas Galbany,[1] Amber den Ouden,[1,2] Simone van den Heuvel,[1] Raoul Timmermans,[1] Jos Smits,[1] Tom Mokveld,[3] Egor Dolzhenko,[3] Xiao Chen,[3] Arthur van den Wijngaard,[4] Michael A. Eberle,[3] Helger G. Yntema,[1] Alexander Hoischen,[1,2,5,6] Christian Gilissen,[1,2,6,*] and Lisenka E.L.M. Vissers[1,2,6,*]



Examples of variants identified in an automated fashion or by visual inspection

- Sequenced **"30x HiFi genomes for 100 samples with 145 known clinically relevant germline variants** that are challenging to detect using short-read sequencing and necessitate a broad range of complementary test modalities in diagnostic laboratories."
- **"Identified 93% of pathogenic variants** that are most challenging to detect using short-read technologies."
- "89% of all automatically called variants could also be identified using 15-fold coverage … possibly enhancing cost-effective diagnostic implementation."

First Vega systems **demonstrating excellent performance** with customers

"While the Vega and Sequel II have the same genotype results for all the 96 samples, Vega excels at yield of HiFi reads, QV, running time, data processing efficiency, and hands-on time, making it a more suitable platform for clinical application."

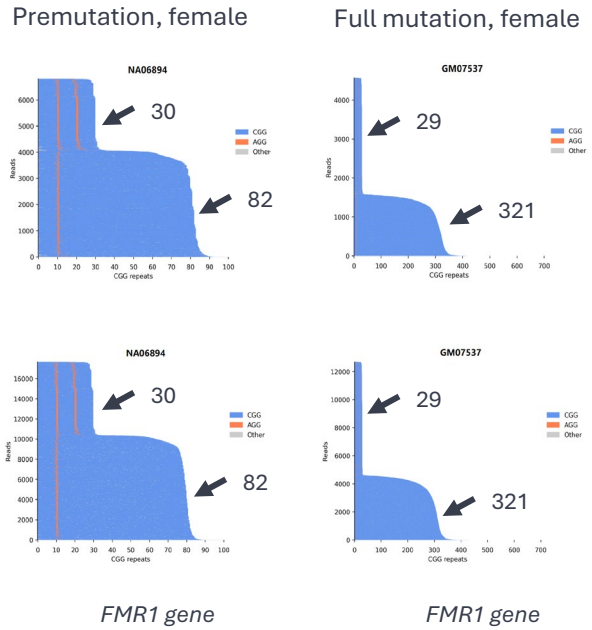
Dr. Aiping Mao

BerryGenomics 贝瑞基因

Thalassemia assay

α-globin gene loci *β-globin gene loci*

Fragile X syndrome assay



FMR1 gene *FMR1 gene*

Rep	Platform	Running time	HiFi reads	Yield	Mean length	Median QV
Cell 1	SQII	30 h	2.9 M	27.7 Gb	9.4 Kb	Q33
	Vega	24 h	7.0 M	64.9 Gb	9.2 Kb	Q36
Cell 2	SQII	30 h	2.5 M	22.8 Gb	9.0 Kb	Q32
	Vega	24 h	7.5 M	64.9 Gb	8.6 Kb	Q37

PacBio

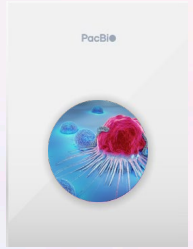
Intend to develop and launch IVD solution aligned with FDA final rule stage 4

Success of Berry collaboration and PureTarget adoption in clinical laboratories highlights revenue opportunity

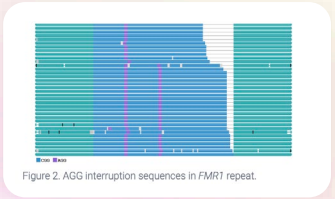
Components required for end-to-end clinical solution are in place

Saliva / Buccal extraction
Nanobind PanDNA

Expanded Panel of gene targets
PureTarget



Sequencing platform
Vega



Analysis that's IVD Grade Compatible with 3rd party reporting
TRGT

PacBio Compatible

Reporting
IVD-grade PacBio compatible partners

Stage 1

Final rule established. Medical device reporting; reporting for corrections and removals

Stage 2

Registration and listing, labeling, investigational device exemption

Stage 3

Quality systems requirements

Stage 4

Premarket approval (PMA) application submissions for high-risk LDTs (class III devices)

Not before Oct 2027

Stage 5

501(k) or de novo submission for low- to moderate-risk LDTs (nonexempt class I or II)

Not before Apr 2028

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Creating the world's most advanced sequencing technologies

PacBio