PacBio and DNAstack Launch First Global Federated HiFi Whole Genome Dataset to Accelerate Rare Disease Research

February 24, 2026 at 9:05 AM EST

Collaboration powers secure international data sharing through the HiFi Solves Global Consortium

MENLO PARK, Calif., Feb. 24, 2026 (GLOBE NEWSWIRE) -- PacBio (NASDAQ: PACB), developer of the world's most advanced sequencing technologies, today announced a collaboration with DNAstack to power the world's first global federated dataset of HiFi whole genome sequencing data. Through the HiFi Solves Global Consortium, the collaboration enables secure international research — allowing genomic insights to travel across borders while sensitive data remains under institutional control.

Participating institutions connect HiFi whole genome sequencing data and associated metadata within a highly secure federated environment. Hosted by DNAstack and accessible at https://hifisolves.org, the platform enables researchers to query harmonized datasets across institutions without centralizing protected data, supporting global collaboration while maintaining compliance with regional data privacy regulations.

The consortium now includes nearly 30 clinical and research institutions across 15 countries spanning North America, Europe, the Middle East, Africa, East Asia, and Southeast Asia, with continued expansion underway. Collectively, members have connected or committed to connect more than 10,000 HiFi whole genome sequences — forming one of the largest and most diverse federated HiFi datasets dedicated to rare disease research.

"HiFi whole genome sequencing delivers the accuracy and completeness required to confidently detect even the most challenging variants," said Christian Henry, President and Chief Executive Officer of PacBio. "By partnering with DNAstack, we are extending the power of HiFi sequencing beyond individual institutions — enabling secure, federated analysis at global scale while maintaining local data control. This combination of technological precision and international collaboration strengthens variant interpretation and accelerates discoveries for patients with rare disease."

By increasing statistical power for rare disease studies, the federated model enables insights that would be much more difficult, if not impossible, within siloed datasets — while preserving data sovereignty and meeting regional compliance requirements.

"Genome sequencing can help deliver answers to patients who need it most — but only if we can learn from global datasets while protecting participants' privacy," said Marc Fiume, CEO at DNAstack. "This partnership is proving the value of securely connecting leading hospitals and research centers around the world without moving sensitive data. By enabling collaboration at this scale, we're helping clinicians reach answers faster, improve rare disease diagnosis, and build the foundation for learning health systems that benefit entire populations."

"For rare disease genomic analysis, accuracy and completeness are essential," said Eric Vilain, M.D., Ph.D., UC Irvine School of Medicine and a member of the HiFi Solves Global Consortium. "Taking advantage of the consortium's federated model, we can securely filter variants and interpret findings in the context of a diverse global dataset while maintaining full control of patient data — ultimately delivering clearer answers to families faster and with greater confidence."

HiFi sequencing plays a central role in the consortium's impact on better resolving the genetic underpinnings of rare diseases. Its high accuracy and ability to resolve complex genomic regions, including paralogous genes and structural variants, provide clinical researchers with greater confidence in detecting disease-causing variants. When combined with federated data sharing, HiFi sequencing enables interpretation of rare variants within a broader global context — improving confidence in understanding the biology of rare diseases and, ultimately, accelerating time to answers for patients and families.

In November 2025, consortium members from the EMEA region published the first major study from the HiFi Solves initiative, "*HiFi sequencing accurately identifies clinically relevant variants in paralogous genes,*" demonstrating the value of federated HiFi whole genome sequencing at scale. In the study, HiFi sequencing detected 100% of known variants, reducing the need for multiple complementary technologies and simplifying workflows.

Launched in 2023, the HiFi Solves Global Consortium brings together leading clinical genomics research organizations focused on advancing the use of highly accurate HiFi sequencing in rare disease research. Since its inception, the consortium has nearly doubled in size, reflecting growing global demand for collaborative, privacy-preserving genomic research models.

About PacBio

PacBio (NASDAQ: PACB) is a premier life science technology company that designs, develops, and manufactures advanced sequencing solutions to help scientists and clinical researchers resolve genetically complex problems. Our products and technologies, which include our HiFi long-read sequencing, 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.

About DNAstack

DNAstack builds the trust infrastructure for biomedical data collaboration. Its federated platform connects genomic and clinical data across institutions, enabling researchers and clinicians to learn together while data stays under local control. DNAstack powers national and international precision health initiatives and is a global leader in open standards through the Global Alliance for Genomics & Health (GA4GH).

Forward-Looking Statements

This press release may contain "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 statements relating to the availability, uses, accuracy, advantages, quality or performance of, or benefits of using, or expected benefits of using, PacBio products or technologies, including in connection with the collaboration with DNA Stack and the HiFi Solves Global Consortium to, among other things, expand the range of genomic insights of participating consortia members, enable secure analysis of genomic data while meeting regional compliance requirements, deliver answers to, among others, clinical researchers and families, and provide greater confidence both in detecting disease-causing variants and understanding the biology of rare diseases, and the commitment to connect more than 10,000 HiFi whole genome sequences, among other future events. You should not place undue reliance on forward-looking statements because they are subject to assumptions, risks, and uncertainties and could cause actual outcomes and results to differ materially from currently anticipated results, including, challenges inherent in sequencing a large number of genomes and complying with evolving international privacy compliance requirements, the difficulty of generating discoveries in new areas of research or with respect to diseases that are rare; potential product performance and quality issues; rapidly changing technologies and extensive competition in, and potential FDA regulatory issues relating to, genomic sequencing; unanticipated increases in costs or expenses; interruptions or delays in the supply of components or materials for, or manufacturing of, PacBio products and products under development; third-party claims alleging infringement of patents and proprietary rights or seeking to invalidate PacBio's patents or proprietary rights, among others. Additional factors that could materially affect actual results can be found in PacBio's most recent filings with the Securities and Exchange Commission, including PacBio's most recent reports on Forms 8-K, 10-K, and 10-Q, and include those listed under the caption "Risk Factors." These forward-looking statements are based on current expectations and speak only as of the date hereof; except as required by law, PacBio disclaims any obligation to revise or update these forward-looking statements to reflect events or circumstances in the future, even if new information becomes available.

Contacts

Investors:
ir@pacb.com

Media:
pr@pacb.com